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Studies in Ancient Greek Philosophy

In Honor of Professor Anthony Preus

Edited by D. M. Spitzer

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For Tony, in gratitude and appreciation for your wisdom touched with genuine compassion as a teacher, mentor, colleague—an inspiration

ἡ φύσις καὶ ἡ διδαχὴ παραπλήσιόν ἐστι. καὶ γὰρ ἡ διδαχὴ μεταρυθμίζει τὸν ἄνθρωπον, μεταρυθμοῦσα δὲ φυσιοποιεῖ

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Foreword

It is a privilege and a great pleasure to write a foreword to this volume in honor of Tony Preus, a colleague whose academic work I have known and admired since my undergraduate years, whose leadership of the Society for Ancient Greek Philosophy (SAGP) has kept it alive and thriving for more than four decades, and whose wisdom and huge experience has guided my own presidency of SAGP since my election to that office.

Tony was born in New Jersey and is of Norwegian descent. He comes from a long line of Lutheran ministers sent by the church of Norway to the US since 1853 to found and organize the Norwegian Lutheran Church. Tony grew up in that tradition since his father, who had also received a PhD (in Theology) from Princeton University, was a pastor of a congregation in New Jersey, and later in Minnesota. In keeping with family customs, Tony went to Luther College in Iowa with the intention of subsequently pursuing an ecclesiastic career. His excellent training in Greek and Latin, however, as well as his love of Classical authors, led him to change direction. He was awarded a Woodrow Wilson Fellowship and went to Johns Hopkins University to study Philosophy and Classics. His next achievement, and a stroke of luck, was a Rhodes Scholarship which enabled him to study at Trinity College, Oxford (1959–1962). One of the interviewers for the Rhodes Scholarship asked him whether he believed that everyone should study Greek philosophy. "No," said Tony, "but some people must carry that tradition on and this is what I want to do in my life." True to his word, after receiving his MA in *Literae Humaniores* from Oxford University (1962) he returned to Johns Hopkins and completed his PhD under the supervision of Ludwig Edelstein and Ed Lee in 1968. In the meantime, he had been recruited by Binghamton University in 1964 to join the Philosophy Faculty as a junior member. In Tony's own words, he was "directed by divine intervention to teaching" and soon came to consider Binghamton University his intellectual home.

His remarkable career there is highly revelatory of who Tony is and what he has offered to his home institution, his students, the discipline, and the profession as a whole. When he joined Binghamton, the University had approximately 2,800 students. Many were among the best in the state of New York but could never have afforded to go to an Ivy League School. The explicitly stated mission of the University was, and still is, to provide for these top-notch students a strong

academic education including, notably, a high-quality education in the Liberal Arts. It is this twofold mission, social and intellectual, that Tony endorsed with all his heart and has pursued so very successfully to this day. Much of what he has published and everything that he has taught is related in one way or another to that context. A brief and selective survey of his topics of research and teaching conveys an idea of the enormous breadth of his interests, his youthful energy, his intellectual flexibility and versatility, and his extraordinary capacity to keep up with the times. Similar observations apply to his role as Secretary of SAGP for the best part of the last half century.

Since his early years, Tony has had an abiding interest in Biology, which led him to do his PhD on Aristotle's biological works (then a relatively neglected subject). In addition to his seminal books *Science and Philosophy in Aristotle's Biological Works* (1975) and *Aristotle and Michael of Ephesus On the Movement and Progression of Animals* (1981), he contributed significantly to the growth of interest in ancient biological theory, zoology, psychology, and medical practice with over 50 articles on Aristotle, Theophrastus, and the Peripatetic tradition as well as Plotinus and Galen. Another area of interest, partly related to his studies of ancient psychological theories, is the Presocratics: the origins of Greek Philosophy, the Orphics, Empedocles and generally the development of Philosophy in *Magna Graecia*, the development of Greek rhetoric and in particular Gorgias, and generally themes, patterns, and arguments in Presocratic thought. Numerous articles attest to Tony's interest in Plato's Eleatic dialogues, Plato's and Aristotle's political philosophy, and Aristotle's metaphysics, while some of his publications focus on contemporary ethical themes, such as respect for the dead and the dying, the duty to treat AIDS patients, and the vexed question of whether the ancients had a concept of human rights. In parallel to this remarkable production, Tony also co-edited with John Anton four volumes of *Essays in Ancient Greek Philosophy* (1983–1992), was the sole editor of the fifth volume of the series, and has published approximately 90 book reviews. Moreover, his love and understanding of French language and culture turned him into a consummate translator of contemporary philosophical studies from French into English. He has translated books by Pierre Pellegrin, and articles by Antoine Faivre and Paul Moraux, and continues this practice to this very day.

His contributions to academic teaching cover the broadest spectrum. Topics include almost every area of Ancient Philosophy, from the Presocratics to Plato and the Platonists, Aristotle and his school, the Hellenistic Philosophers and far beyond; Greek language, poetry, and medicine; Literature and composition; Ethics and Policy, History and Philosophy of Human Services, Medical Ethics, and Philosophy of Education; Philosophy of Religion, Philosophy of Biology, and the Ethics of Pain and Death. He has taught students of all levels, has directed or co-directed numerous dissertations, has served on a large number of dissertation committees, and has kept up with many of his students after their graduation. He has pursued his duties as a teacher of Philosophy with the utmost altruism, infectious enthusiasm, and remarkable success, while also serving Binghamton University as Chair and as member of major university committees, task forces,

and advisory boards. On account of his absolutely exceptional performance and especially his superb record as a Philosophy teacher and mentor, Binghamton University bestowed on him the title of Distinguished Teaching Professor of Philosophy—a rare and most deserved honor.

Tony's versatility, extraordinary energy, and concern for others, and also his distinctive way of bringing philosophy to bear on crucial issues in life, has found expression in important community service. He has served on the Lourdes Hospital Institutional Review Board since 1978 and was Committee Chair for five years (1982–1987). He has been on the Lourdes Death and Dying Committee for 12 years (1975–1987), on the Lourdes Hospital Ethics Committee for six years (1987–1993), on the Long Term Health Care Ethics Committee for eight years (1987–1995), and on Ethics Committee of NYS Family Physicians for two years (1986–1988). He has given dozens of talks at all the local hospitals, and also at schools, churches, synagogues, television and radio stations. And he has done much else, too many things to mention, each of them touching in greater or smaller ways on people's lives. An accomplished musician on the bass viol, in his student years he played with the orchestra of the City of Oxford and was a jazz performer with the "Transatlantics"; after his return to the US he played for several years with the Binghamton Symphony Orchestra. One wonders when Tony found the time to sleep. Yet the pleasure that he derives from these manifold activities, communal as well as academic, is impossible to miss. He has the radiance of a serene and deeply contented person whose happiness derives not merely from fulfilled academic ambition but from the consistent pursuit of what he considers his own mission and a lifetime of faithful service to the institutions that he has bound himself to.

Tony's leading role as Secretary of the SAGP lies beyond the sphere of any particular university or research center and constitutes a hugely important and long-lasting contribution to the field of Ancient Philosophy and everyone engaged in it. He became involved in SAGP when he replaced John Anton as Secretary in 1968. His first move was to expand the activities of SAGP by including the Central and Pacific Divisions of the American Philosophical Association (APA) as venues for SAGP talks and panels. Over the next many years, he oversaw several changes, partly imposed by the decisions of the APA and the Society for Classical Studies (SCS; formerly the American Philological Association), partly suggested by currents in scholarship, and by the necessities that came with the times. He served together with many SAGP Presidents, including Gregory Vlastos, G.E.L. Owen, Glen Morrow, Ludwig Edelstein, Raphael Demos, Philip Merlan, Friedrich Solmsen, Julius Moravcsik, John Anton, Willian Fortenbaugh, Joseph Owens, Charles Kahn, David Furley, Diskin Clay, Deborah Modrak and several others, always with efficiency and excellent judgment. He kept SAGP going even when it fell upon harder times, with faith in the Society and its goals, love for the discipline and its ministers, total dedication and success.

In the early months of my own presidency, Tony guided the Society through an expansion to include additional constituencies, the election of more representatives to the Board of Directors, a radical revision of the Society's Bylaws, the creation

of a new website, a system for the electronic payment of dues, and the institution of two SAGP awards, one intended for the best paper accepted for the APA/SCS meeting, the other bearing the title of the SAGP Annual Lectureship and destined to acknowledge a senior scholar's lifetime contribution to our field in the form of a widely attended and broadcast lecture by the scholar who receives this honor. Tony inspired, informed, and spearheaded these changes with characteristic wisdom and foresight. He also organized, with the help of the Society's first Assistant Secretary, Betsy Jelinek, the first SAGP Annual Lectureship held by David Sedley.

In the approximately 70 years since its foundation, no challenge that SAGP has had to face has been nearly as daunting as the COVID-19 pandemic. It affected virtually every activity that the Society had planned, and the cancellation of talks and panels was all the more demoralizing because it followed almost immediately upon the structural overhaul mentioned above and designed to take the Society forward into the future. As President, I was at a loss and the same held for many other members of the Board. Not so Tony, who immediately went into high gear to move the activities of the Society to Zoom, mastered the necessary technicalities, organized the talks and panels at the APA/SCS as remote events, and opened up possibilities for SAGP that neither myself nor anyone else on the Board had envisaged. Undoubtedly, the most important innovation that he introduced consists in a Zoom series in which primarily junior scholars present work in progress and receive input from their peers as well as leading scholars in attendance. So far as the Society is concerned, these Zoom sessions, as well as numerous other remote events proposed and organized by Tony, bring SAGP centerstage, put it in closer contact with cutting-edge research, enormously enrich its agenda, and optimally serve the goals of promoting cooperation between specialists and encouraging the work of younger scholars in our discipline.

It is difficult to describe the inspiration, imagination, and enterprise that Tony brings to the planning and organization of such events. It is even more difficult to convey how profoundly touching is his commitment to a deeply egalitarian mode of philosophical conversation that is largely unaffected by socio-economic factors and institutional elitism. In a recent conversation on the subject, Tony mentioned that Plato actually makes the point that this is how philosophy is done: people get together and talk in specific settings, public or private. "We don't have the luxury of Polemarchus' house in Piraeus," he said, "but we do now have remote as well as in person meetings and can do philosophy either way." I end this all too short tribute with this thought, and wish to express my admiration and gratitude to Tony for his immense contributions to SAGP, the profession, and our discipline.

Voula Tsouna
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Acknowledgments

Great and many thanks to Tony Preus, who (as Gerard Naddaf writes in his chapter) is always there when you need him. In the case of the preparation of this volume, Tony has been available for various and sundry queries and requests for assistance, including regarding some tedious minutiae in the preparation of his bibliography and, most pleasurably, some exchanges about translating οὐσία in a very specific context. Tony's efforts to sustain without interruption the proceedings of the SAGP have been, to echo Voula Tsouna, essential, inviting, and seamless.

To the several contributors who have been involved with this project since before its inception—Betsy, Lew, John, J. J.—thank you for your generosity of spirit and steadfast encouragement through the long and complicated progress that has led, at last, to a volume honoring Tony.

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Finally, I would like to express warm gratitude to all the contributors of this volume. The patience, enthusiasm, and unfailing support you have shown through a somewhat lengthy process has made this project enjoyable, while your contributions have made it a rich and truly excellent way to honor Tony Preus through offering a collection of papers that advance the field he has done so very much to develop and promote.

Abbreviations

Abbreviations of ancient sources conform to the system laid out in Simon Hornblower, Antony Spawforth, eds., *The Oxford Classical Dictionary*, 3rd ed. Other abbreviations are announced within each chapter.

Anthony Preus

Distinguished Teaching Professor of Philosophy

Binghamton University

Bibliography

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Books

Single authored

2015. *Historical Dictionary of Ancient Greek Philosophy*. 2nd ed. Lanham: Rowman & Littlefield.

2012. "Greek Philosophy." In *Oxford Bibliographies Online*. Oxford: Oxford University Press, Online. Last updated 24 November, 2020.

2007. *Historical Dictionary of Ancient Greek Philosophy*. Lanham: Scarecrow Press. (For a time starting in 2010, the paperback edition of this book has been known as *The A to Z of Greek Philosophy*).

1996. *Notes on Greek Philosophy from Thales to Aristotle*. Binghamton: Global Publications, Institute of Global Cultural Studies (IGCS), Binghamton University, SUNY. (2nd ed., 1999).

1981. *Aristotle and Michael of Ephesus On the Movement and Progression of Animals*. Hildesheim: Georg Olms Verlag.

1975. *Science and Philosophy in Aristotle's Biological Works*. Hildesheim: Georg Olms Verlag.

Edited volumes

2001. *Essays in Ancient Greek Philosophy, Volume VI: Before Plato*. Albany: SUNY Press.

Edited with John Anton.

1992. *Essays in Ancient Greek Philosophy, Volume V: Aristotle's Ontology*. Albany: SUNY Press.

1991. *Essays in Ancient Greek Philosophy, Vol. IV: Aristotle's Ethics*. Albany: SUNY Press.

1989. *Essays in Ancient Greek Philosophy, Vol. III: Plato*. Albany: SUNY Press.
1983. *Essays in Ancient Greek Philosophy, Vol. II*. Albany: SUNY Press.

Translations (French to English)

2020. *Endangered Excellence: On the Political Philosophy of Aristotle*. By Pierre Pellegrin. Albany: SUNY Press.
1986. *Aristotle's Classification of Animals: Biology and the Conceptual Unity of the Aristotelian Corpus*. By Pierre Pellegrin. Berkeley: University of California Press.

Articles

2020. "The Techne of Nutrition in Ancient Greek Philosophy." *Archai* 29: 1–34.
2017. "Philosophy and Rhetoric in Western Greece: Focus on Empedocles and Gorgias." In *Politics and Performance in Western Greece*, edited by Heather L. Reid, Davide Tanasi, and Susi Kimbell, 197–208. Sioux City: Parnassos Press.
2016. "The Philosophical Climate in Magna Graecia from the mid-6th to the mid-4th BCE." In *Philosopher Kings and Tragic Heroes*, edited by Heather L. Reid and Davide Tanasi, 1–24. Sioux City: Parnassos Press.
2012. "Aristotle on Oligarchy: Theory and Observation." *Philosophical Inquiry* 35, no. 3: 26–58.
2011. Introduction to the Transaction Edition of Alban Dewes Winspear, *The Genesis of Plato's Thought*: "The Genesis of Winspear's Thought." New Brunswick: Transaction Publishers.
2010. "Aristotle." In *The Oxford Encyclopedia of Ancient Greece and Rome*. Oxford: Oxford University Press.
2008. "Pre-Socratic Philosophy." In *The Humanities at Work: International Exchange of Ideas in Aesthetics, Philosophy and Literature*, edited by Yubraj Aryal, 248–69. Kathmandu: Sunlight Publication.
2005. "Did the Ancient Greeks have a Concept of Human Rights?" *International Journal of Decision Ethics* 1, no. 2: 43–64.
2005. "Citizenship and Participation in Government in Ancient Greek Political Thought." *Skepsis* 26, no. 1: 150–163.
2004. "Major Trends in Greek Philosophy in the United States, 1953–2003." In *Greek Philosophy in the New Millenium: Essays in Honour of Thomas M. Robinson*, edited by Livio Rossetti, 75–88. Sankt Augustin: Academia Verlag.
2002. "Plotinus and Biology." In *Neoplatonism and Nature: Studies in Plotinuis' Enneads*, edited by Michael F. Wagner, 43–55. Albany: SUNY Press.
1999. "Hellenic Philosophy of Law: Conceptual Framework." In *Encyclopedia of Philosophy of Law*, edited by C. B. Gray, 353–356. New York: Garland.
1999. "Hellenic Philosophy of Law: Sources for the Earlier Period." In *Encyclopedia of Philosophy of Law*, edited by C. B. Gray, 356–360. New York: Garland.
1998. "Thoth and Apollo: Greek Myths of the Origin of Philosophy." *Methexis* 11: 113–125.
1997. "Greek Philosophy in Egypt: From Solon to the Arab Conquest." In *Greeks & Barbarians: Essays on the Interactions between Greeks and Non-Greeks in Antiquity and the Consequences for Eurocentrism*, edited by John E. Coleman and Clark A. Walz, 155–174. Bethesda: CDL Press.

1997. "Hermetica: Egyptian Religious and Philosophical Texts." In *Encyclopedia of Ancient Philosophy*, edited by Donald J. Zeyl, Daniel Devereux, and Philipo Mitsis, 263–265. Westport: Greenwood Press.
1997. "Polemon of Athens." In Zeyl, Devereux, and Mitsis, *Encyclopedia of Ancient Philosophy*, 439.
1997. "Some Ancient Ecological Myths and Metaphors." In *The Greeks and the Environment*, edited by Laura Westra and T. M. Robinson, 11–18. Lanham: Roman & Littlefield.
1997. "Sotion of Alexandria." In Zeyl, Devereux, and Mitsis, *Encyclopedia of Ancient Philosophy*, 524.
1997. "Wisdom Texts and Philosophy." *Tópicos* 13, no. 1: 237–254.
1995. "The Priority of the Intelligible." Review of *Form and the Good in Plato's Eleatic Dialogues*, by Kenneth Dorter. *Apeiron* 28, no. 3: 239–249.
1994. "Ο Αριστοτέλης για τη Δουλεία: Προσφατες Ηρμηνειες." Translated by D. Z. Andriopolous (Δ. Ζ. Ανδριοπουλος). In Αριστοτέλης: Οντολογια, Γνωσιοθεωρια, ήθικη, πολιτικη φιλοσοφια, αφιερωμα στον, John P. Anton, edited by Δ. Ζ. Ανδριοπου λος. Athens: Βιβλιοπολειο της "εστιας". (Translation of 1993b).
1993a. "Hermetica Bibliography." *Journal of Neoplatonic Studies* II, no. 1: 151–155.
1993b. "Aristotle on Slavery: Recent Reactions." *Philosophical Inquiry* 15, nos. 3–4: 33–47.
1992. *Greek Philosophy: Egyptian Origins*. Binghamton: IGCS. Binghamton University Research Papers #3.
1992. *Aristotle on Africa*. Binghamton: IGCS. Binghamton University Research Papers #7.
1991. "Man and Cosmos in Aristotle: *Metaphysics* Lambda and the Biological Works." In *Biologie Logique et Metaphysique*, edited by Daniel Devereux and Pierre Pellegrin, 467–487. Paris: Editions du Centre National de la Recherche Scientifique (CNRS).
1991. "Animal and Human Souls in the Peripatetic School." *Skepsis*. Reprinted in *Philosophies of Being and Mind*, edited by J. T. H. Martin, 125–149. Delmar: Caravan Books, 1992.
1990. "Michael of Ephesus and the History of Zoology." In *The Classics in the Middle Ages: Papers of the Twentieth Annual Conference of the Center for Medieval and Early Renaissance Studies*, edited by Aldo S. Bernardo and Saul Levin, 265–282. Binghamton: Center for Medieval and Early Renaissance Studies.
1989. "AIDS: The Duty to Treat, A Philosopher's Perspective." *The Mount Sinai Journal of Medicine* 56, no. 3: 254–258.
1988/9. "Aristotle and Respect for Persons." *University of Dayton Review* 19, no. 3: 71–80. Reprinted in Anton and Preus, *Essays in Ancient Greek Philosophy*, *Vol. IV: Aristotle's Ethics* 1991, 215–226.
1988. "Drugs and Psychic States in Theophrastus' *Historia Plantarum* 9.8–20." In *Theophrastean Studies: Rutgers Studies in Classical Humanities*, vol. III, edited by W. W. Fortenbaugh and R. W. Sharples, 76–99. New Brunswick: Transaction Books.
1986. "Aristotle on Healthy and Sick Souls." *The Monist* 69, no. 3: 416–433.
1985. "Fidelity and Collaboration." *Translation Perspectives* II: 87–94.
1984. "Respect for the Dead and Dying." *Journal of Medicine and Philosophy* 9, no. 5: 409–415.
1983. "Biological Theory in Porphyry's *De abstinentia*." *Ancient Philosophy* 3, no. 2: 149–159.
1983. "Comments on Professor Kerferd's Paper: Possible Stoic Models of Impulses." In *On Stoic and Peripatetic Ethics*, edited by W. W. Fortenbaugh, 99–106. New Brunswick: Transaction Books.

1983. "Aristotle and Hippocratic Gynecology." In *Aristoteles als Naturwissenschaftstheoretiker*, edited by Johannes Irmscher and Georg Harig, 189–202. Berlin: Akademie Verlag.
1982/3. "Socratic Psychotherapy." *University of Dayton Review* 16, no. 1: 15–23.
1982. "Michael of Ephesus on Aristotle *IA* and *MA*." World Congress on Aristotle, *Proceedings*.
1981. "Ethics and Policy in the Human Services." *American Philosophical Association Newsletter on Teaching Philosophy* 2, no. 3: 6–7.
1981. "Intention and Impulse in Aristotle and the Stoics." *Apeiron* 15, no. 1: 48–58.
1981. "Reply to Jacobs." *Nature and System* 3, no. 2: 119–121.
1979. "*Eidos* as Norm in Aristotle's Biology." *Nature and System* I (1979): 79–101. Reprinted in Anton and Preus, *Essays in Ancient Greek Philosophy*, *Vol. II*., 340–363.
1977. "Galen's Criticism of Aristotle's Conception Theory." *Journal of the History of Biology* 10, no. 1: 65–85.
1975. "Biomedical Techniques for Influencing Human Reproduction in the Fourth Century BC." *Arethusa* 8, no. 2: 237–263.
1975. "Geometric Method in Aristotle's *Progression of Animals*." *Historical and Philosophical Dimensions of Logic, Methodology and Philosophy of Science*. Fifth International Congress of Logic, Methodology, and Philosophy of Science, *Proceedings* XII, edited by R. E. Butts and J. Hintikka, 45–46. Dordrecht: D. Reidel.
1973. "Aristotle's Three Theories of the Soul." Proceedings of the Creighton Club: 16–31.
1970. "Science and Philosophy in Aristotle's *Generation of Animals*." *Journal of the History of Biology* 3, no. 1:1–52.
1970. "The Continuous Analogy: Uses of Continuous Proportions in Plato and Aristotle." *Agora* 1, no. 2: 20–42.
1969/70. "The Continuous Analogy: Aristotle's Cosmological Argument." Proceedings of the Creighton Club: 82–95.
1969. "Aristotle's Natural Necessity." *Studi Internazionali di Filosofia* I (1969): 91–100.
1969. "Aristotle's 'Nature uses…'." *Apeiron* 3, no. 2: 20–33.
1968. "Aristotle's *Parts of Animal*s 2.16.659b13-19: Is it Authentic?" *The Classical Quarterly* 18, no. 2: 170–178.
1968. "On Dreams 2, 459b24-460a33, and Aristotle's Οψις." *Phronesis* 13, no. 2: 176–182.
1964. "Aristotle on Biology as Philosophy." *Oneota Review* 1, no. 2: 5–11.

Translations (French to English).

1994. "Ancient and Medieval Sources of Modern Esoteric Currents." Chap. 1 in *Access to Western Esotericism*, by Antoine Faivre. Albany: SUNY Press.
1989. (The Pellegrin parts). "Cicero and the Aristotelian Theory of Divination by Dreams." By José Kany-Turpin and Pierre Pellegrin. In *Cicero's Knowledge of the Peripatos*, edited by William W. Fortenbaugh and Peter Steinmetz, 220–245. New Brunswick: Transaction Books.
1987. "Logical Difference and Zoological Difference: The Unity of Aristotle's Thought." By Pierre Pellegrin. In *Philosophical Issues in Aristotle's Biology*, edited by Allan Gotthelf and James Lennox, 313–338. Cambridge: Cambridge University Press.
1985. "Aristotle: A Zoology Without Species." By Pierre Pellegrin. In *Aristotle on Nature and Living Things, Philosophical and Historical Studies Presented to David M. Balme on His Seventieth Birthday*, edited by Allan Gotthelf, 95–116. Pittsburgh: Mathesis Publications; Bristol: Bristol Classical Press.

1985. "Galen and the 'De Partibus Animalium'." By Paul Moraux. In Gotthelf, *Aristotle on Nature and Living Things*, 327–344.

Book reviews

2018. *Plato Laws 1 and 2. Translated with and Introduction and Commentary*, by Susan Sauvé Meyer. *Plato: The Internet Journal of the International Plato Society* 18: 127–128.
2013. *Pursuits of Wisdom*, by John Cooper. *Polis* 30, no. 1: 129–132.
2012. *Theophrastus, On First Principles*, by Dmitri Gutas. *The Classical Review* 62, no. 1: 91–93.
2008. *Aristotle on Definition*, by Marguerite Deslauriers. *History and Philosophy of Logic* 29, no. 3: 302–305.
2005. *The Female in Aristotle's Biology*, by Robert Mayhew. *Journal of the History of Philosophy (JHP)* 43, no. 1: 109–110.
2004. *Studies in Ancient Philosophy*, vol. XV, edited by C.C.W. Taylor. *International Studies in Philosophy (ISP)* 46, no. 1: 321–322.
2004. *Ethics in Reproductive and Perinatal Medicine*, by Carson Strong. *ISP* 46, no. 1: 311–314.
2004. *Emotion and Peace of Mind*, by Richard Sorabji. *ISP* 46, no. 1: 302–303.
2004. *Order in Multiplicity: Homonymy in the Philosophy of Aristotle*, by Christopher Shields. *ISP* 46, no. 1: 297–299.
2002/2003. *Aristotle on Life and Death*, by R. A. H. King. *Hermathena* 173/174: 218–222.
2002. *Theophrastus against the Presocratics and Plato: Peripatetic Dialectic in the De Sensibus*, by Han Baltussen. *Religious Studies Review (RSR)* 28, no. 2: 164.
2002. *The Myth of Aristotle's Development and the Betrayal of Metaphysics*, by Walter Wehrle. *JHP* 40, no. 4: 536–538.
2001. *The Unity of Plato's "Sophist": Between the Sophist and the Philosopher*, by Noburu Notomi. *RSR* 27, no. 3: 288.
2001. *Plato: Clitophon*, edited by S. R. Slings. *RSR* 27, no. 2: 161–162.
2000. *Hippocrates*, by Jacques Jouanna. *RSR* 26, no. 3: 272.
1999. *Studies in Greek Philosophy, Vols I & II*, by Gregory Vlastos. *ISP* 31, no. 4: 138–140.
1999. *Galen: On Antecedent Causes*, by R. J. Hankinson. *RSR* 25, no. 2: 187.
1999. *Asclepius: Collection and Interpretation of the Testimonies*, by E.J. & L. Edelstein. *RSR* 25, no. 1: 76.
1999. *Aristotle's Metaphysics Θ 1–3: On the Essence and Actuality of Force*, Martin Heidegger. Translated by Walter Brogan and Peter Warnek. *ISP* 31, no. 2: 141–143.
1999. *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul*, by Gad Freudenthal. *ISP* 31, no. 2: 134–136.
1998. *Galen and Chrysippus on the Soul: Argument and Refutation in the De Placitis, Books II-III*, by Teun Tieleman. *RSR* 24, no. 4: 412.
1998. *Aristotle and Neoplatonism in Late Antiquity: Interpretations of the De Anima*, by Henry J. Blumenthal. *RSR* 24, no. 2: 190–191.
1997. *The Masters of Truth in Archaic Greece*, by Marcel Detienne. *RSR* 23, no. 3: 291.
1997. *Aristotle's Philosophical Development: Problems and Prospects*, by William Wians. *JHP* 35, no. 3: 460–462.
1995. *Ethics With Aristotle*, by Sarah Broadie. *RSR* 21, no. 2: 135.

1995. *Taking Life Seriously: A Study of the Argument of the "Nicomachean Ethics"*, by Francis Sparshott, and *Aristotle on the Goals and Exactness of Ethics*, by Georgios Anagnostopoulos. *JHP* 33, no. 3: 511–514.
1994. *Forms in Plato's Philebus*, by E. E. Benitez. *ISP* 26, no. 2: 104.
1993. Theophrastus, *De Causis Plantarum* Books III–IV, V–VI, edited and translated by Benedict Einarson and George K. K. Link. *Ancient Philosophy* 13, no. 2: 448–450.
1992. *The Anatomy of Neoplatonism*, by A. C. Lloyd. *The Journal of Neoplatonic Studies* 1, no. 1: 141–145.
1991. *Aristotle on the Human Good*, by Richard Kraut. *RSR* 17, no. 3: 257–258.
1991. *Faces of Medicine: A Philosophical Study*, by Wim J. Van der Steen and P. J. Thung. *ISP* 23, no. 1: 140.
1991. *The Fabric of Character: Aristotle's Theory of Virtue*, by Nancy Sherman. *ISP* 23, no. 3: 147–148.
1991. *Aristotle's Concept of the Universal*, by George Brakas. *ISP* 23, no. 1: 101–102.
1991. *Aristotle on Substance: The Paradox of Unity*, by Mary Louise Gill. *ISIS* 82, no. 2: 362–363.
1991. *Cosmic and Meta-Cosmic Theology in Aristotle's Lost Dialogues*, by Abraham P. Bos. *JHP* 29, no. 4: 669–671.
1991. *Les Choses memes. La pensee du reel chez Aristote*, by Gilbert Dherbey-Romeyer. *Ancient Philosophy* 11, no. 2: 444–445.
1990. *Alfred of Sareshel's Commentary on the Metheora of Aristotle*, by James K. Otte. *ISIS* 81: 759–760.
1990. *Cosmic Problems: Essays on Greek and Roman Philosophy of Nature*, by David Furley. *RSR* 16, no. 4: 340.
1990. Simplicius *On Aristotle's Physics 6*, translated by David Konstan. *RSR* 16, no. 2: 149.
1989. *A New Aristotle Reader*, edited by J. L. Ackrill. *RSR* 15, no. 3: 260.
1989. *The Phaedo: A Platonic Labyrinth*, by Ronna Burger. *ISP* 21, no. 1: 73.
1989. *The Arguments 'From the Sciences' in Aristotle's Peri Ideon*, by Daniel H. Frank. *ISP* 21, no. 1: 81–82.
1989. *Just Health Care*, by Norman Daniels. *ISP* 21, no. 3: 106.
1988. *Aristotle and Logical Theory*, by Jonathan Lear. *ISP* 20, no. 1: 93–94.
1987. *Passage and Possibility: A Study of Aristotle's Modal Concepts, and Nature, Change, and Agency in Aristotle's Physics: A Philosophical Study*, by Sarah Waterlow (Broadie). *ISP* 19, no. 3: 122–123.
1987. *Science, Folklore and Ideology: Studies in the Life Sciences in Ancient Greece*, by G. E. R. Lloyd. *ISP* 19, no. 3: 96–97.
1987. *Aristotle's Theory of Moral Insight*, by Troels Engbert-Pedersen. *ISP* 19, no. 3: 73–75.
1987. *Health and Human Values, A Guide to Making Your Own Decisions*, by Frank Harron, John Burnside, and Tom Beauchamp; *Biomedical-Ethical Issues, A Digest of Law and Policy Development*, by Frank Harron, John Burnside, and Tom Beauchamp; *Human Values and Health Care: Audio-Visual Resources*, by Frank Harron, John Burnside, and Tom Beauchamp. *ISP* 19, no. 1: 84–85.
1987. *A History of Greek Philosophy, vol. vi, Aristotle an Encounter*, by W. K. C. Guthrie. *ISP* 19, no. 1: 80–82.
1986. *The Modes of Scepticism: Ancient Texts and Modern Interpretations*, by Julia Annas & Jonathan Barnes. *RSR* 12, no. 1: 68.
1986. *L'Avénement de la science physique*, by Lambros Couloubaritsis. *ISP* 18, no. 1: 71.

1986. *Aristotle on Mind and the Senses*, edited by G. E. R. Lloyd and G. E. L. Owen. *ISP* 18, no. 1: 94–95.
1986. *The Concept of First Philosophy and the Unity of the Metaphysics of Aristotle*, by Giovanni Reale, translated by J. R. Catan. *ISP* 18, no. 3: 78.
1985. *Le triangle hippocratique dans le monde gréco-romain: Le malade, sa maladie et son médecin*, by Danielle Gourevitch. *ISIS* 76, no. 2: 266.
1985. *The Presocratic Philosophers* (2nd edition), by G. S. Kirk, J. E. Raven, and M. Schofield. *RSR* 11, no. 4: 399.
1984. *Zénon d'Elée*, by Maurice Caveing. *ISIS* 75, no. 3: 607–608.
1984. *Empedocles: The Extant Fragments*, by M. R. Wright. *RSR* 10, no. 3: 287.
1983. *Facets of Plato's Philosophy*, by W. H. Werkmeister. *ISP* 15, no. 3: 123–124.
1983. *Necessity, Cause, and Blame*, by Richard Sorabji. *ISP* 15, no. 1: 119–121.
1982. *The Presocratic Philosophers*, by Jonathan Barnes. *ISP* 14, no. 2: 89–90.
1982. *Alexander of Aphrodisias, De Anima*, translated by A. P. Fotinis. JHP 20, no. 4: 427–429.
1981. *Die Naturphilosophie des Aristoteles*, by G. A. Seeck. *Archiv fűr Geschichte der Philosophie* 63, no. 1: 83–84.
1981. *Selected Papers*, by Harold Cherniss. *ISP* 12, no. 1: 88–89.
1981. "Thirty-Two Essays," review of *Hippocratica, Actes du Colloque hippocratique de Paris (4–9 septembre 1978)*, edited by M. C. Grmek. *Clio Medica* 16, no. 2/3: 152–154.
1980. *Mind and Madness in Ancient Greece: The Classical Roots of Modern Psychiatry*, by Bennett Simon. *ISP* 12, no. 2: 89–91.
1980. *The Middle Platonists, 80 BC-AD 220*, by John Dillon. *ISP* 12, no. 2: 92–94.
1980. *Aristotle's De Motu Animalium*, by Martha Nussbaum. *Journal of the History of Biology* 13: 351–356.
1979. *Substance, Body and Soul: Aristotelian Investigations*, by E. Hartman. *ISP* 11: 211–213.
1978. *Le jugement d'existence chez Aristote*, by Suzanne Mansion. *JHP* 16, no. 2: 255.
1978. *The Origins of Stoic Cosmology*, by David Hahm. *ISP* 10: 219–220.
1978. "Reason in Aristotle's Ethics," review of *Reason and Human Good in Aristotle*, by J. M. Cooper and *Bios Theoretikos*, by T. B. Ericksen. *ISP* 10: 135–137.
1977. *Aristotle and His School*, by Felix Grayeff. *ISP* 9: 209–211.
1977. *Aristotle on Emotion*, by W. W. Fortenbaugh. *ISP* 9: 206–209.
1976. *Aristotele Trattato sul Cosmo*, by Giovanni Reale. *JHP* 14, no. 4: 478–480.
1976. *Articles on Aristotle I: Science*, edited by Jonathan Barnes, Malcolm Schofield, and Richard Sorabji. *ISP* 8: 222.
1976. *Intellectual Experiments of the Greek Enlightenment*, by Friedrich Solmsen. *ISP* 8: 220–222.
1974. *Aristotle*, by John Ferguson and *Aristote et l'analyse du savoir*, by Hervè Barreau. *Studi Internazionali di Filosofia (Studi)* 6: 213–216.
1974. *Aristotle on Memory*, by Richard Sorabji. *Studi* 6: 211–213. Review reprinted in *Filosoficky Casopis* 45, no. 4 (1997): 686–687.
1974. *Xenophon's Socrates*, by Leo Strauss. *Studi* 6: 211.
1974. *The Verb 'Be' in Ancient Greek*, by Charles Kahn. *Studi* 6: 208–211.
1973. *Le premier humanisme byzantine*, by Paul Lemerle. *Studi* 5: 245–247.
1973. *The Older Sophists*, edited by Rosamund Kent Sprague. *Studi* 5: 244–245.
1972. *Essays in Ancient Greek Philosophy*, edited by John P. Anton and George L. Kustas. *Studi* 4: 179–180.

1972. *D'Aristote à Bessarion*, by Paul Moraux. *Studi* 4: 178–179.
1972. *The Philosophy of Chrysippus*, by J. B. Gould. *Studi* 4: 175–178.
1971. *A History of Greek Philosophy*, Vol. III, by W. K. C. Guthrie. *Studi* 3: 291–221.
1970. *Physiological Theory and the Doctrine of the Mean in Plato and Aristotle*, by Theodore Tracy. *Studi* 2: 181–184.
1966. *Selections from Early Greek Philosophy*, 2nd edition, by M. C. Nahm. *The American Oxonian* 52, no. 2: 94–95.

Miscellaneous

SAGP Newsletters, 1981–present.

2007, 1995, 1992, 1989. *Guide to the Finger Lakes Trail in Delaware County and Ulster County, NY*. Distributed by the Finger Lakes Trail Conference.
2006, 1995, 1994, 1993. *FLT End-To-End: A Guide for Backpackers*. Distributed by the Finger Lakes Trail Conference. (This guide continues with the work of Joe Dabes.)
2006, 1995, 1994, 1993. *Guide to the Finger Lakes Trail in Cortland County, and to the Onondaga Trail*. Distributed by the Finger Lakes Trail Conference.
2006, 1995–91, 1988-86. *Guide to the Finger Lakes Trail in Chenango County*. Distributed by the Finger Lakes Trail Conference.
1992, 1989, 1987. *Guide to the Finger Lakes Trail, O'Dell Road to Chippewa Falls, Cortland County NY, and to the Onondaga Trail, Cuyler to Fabius*. Distributed by the Finger Lakes Trail Conference.
1985. "A Science Presents a Dilemma." *Binghamton Press & Sun Bulletin*, Saturday, December 14, 9a.
1985. "Reply to the 'Note from the Editor' and the Letter to the APA by Jay Kantor." *APA Philosophy and Medicine Newsletter* 2.
1984. "One Man's Poison, Another's Nectar." *Binghamton Press*, March 31, 1c, 8c.
1984. "Free Choice vs. Moral Duty." *Binghamton Press*, February 11, 1c, 8c.
1983. *Ethical Issues in the Human Services: Bibliography and Course Outlines* (produced locally and distributed widely to complete work on NEH Grant).
1983. "Philosophy for Life." *Binghamton Press*, May 28, 1c, 8c.
1981. "Ethics and Policy in the Human Services." *American Philosophical Association Newsletter on Teaching Philosophy* 2, no. 3: 6–7.
1981. "Note on Binghamton Medical Ethics Activities." *APA Committee on Philosophy and Medicine Newsletter* 11.
1981. "With Liberty Goes Freedom to Choose." *Binghamton Press*, November 21, 1c, 8c.
1979. "Report on Binghamton Bioethical Grand Rounds." In *Ethics Rounds in Hospitals*. Committee on Philosophy and Medicine, American Philosophical Association.
1972. "Report on the IVth International Congress for Logic, Methodology and Philosophy of Science, Bucharest." 1971. *Studi* 4.
1958. "And She Cried Out… In Anguish." (Short Story) *Luther Life*: 16–20. Reprinted in *One*, 1959.

Introduction

SAGP: Studies and Society

D. M. Spitzer

Society and Studies

Studies in Ancient Greek Philosophy shares the abbreviation SAGP with the Society for Ancient Greek Philosophy: this is meant to gesture towards some relationships between the book and the professional organization. Most of the volume's contributors are members of the Society for Ancient Greek Philosophy (SAGP)—including members of the Society's Board (Fierro, Miller, Thorp, Wheeler), a former officer (Miller), the current Assistant Secretary (Jelinek), and, through her foreword, the Society's President (Tsouna). Beyond this association, the title of this volume and the abbreviation it shares with the Society intends to point to another, more substantive relationship. The SAGP, according to its stated aims, looks "to encourage and contribute to the scholarly study of Ancient Greek Philosophy" through collaboration that "facilitates interactions among international scholars, and highlights the interdisciplinary and intercultural dimensions of our field" (Society for Ancient Greek Philosophy 2022). Each of these aims is reflected throughout this collection.

Diversity

Studies in Ancient Greek Philosophy collects the work of scholars at varied moments in their careers, including a doctoral candidate, early, mid, and late career as well as emeriti faculty, and scholars working independently of academic institutions. The inclusion of contributors from South America, North America, and Europe was facilitated in part by the networks cultivated by the SAGP and specifically Professor Preus, the Society's Secretary. The international roster illustrates the continual realization of the SAGP's international presence and its strong commitment "to promoting equality and diversity in the field of Ancient Greek Philosophy" (Society for Ancient Greek Philosophy 2022), as well as the broad admiration and appreciation for Professor Preus as a scholar, educator, and the society's secretary since 1980. At an earlier moment in the volume's development there was a considerably higher number of papers by women scholars, but due to emerging circumstances and changes in organization some of the initial contributors withdrew or found that circumstances prevented their participation; of these,

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several were women. As it stands, in addition to Voula Tsouna's foreword the book contains three chapters by women philosophers out of 16 total. Hopefully this does not reflect a broader imbalance in the area of study. As a way towards gender inclusivity through the volume, statements that are not direct quotations or translations and that are meant to apply to human beings universally have been rendered either in plural forms or with the use of *they* as a singular pronoun.

Diversity of approaches, styles, and topics forms an important characteristic of this volume, and in this sense it participates in the mode of the *Essays in Ancient Greek Philosophy* series produced from 1971 to 2001 by State University of New York Press, first under the editorship of Professors John Anton and George L. Kustas (volume I), then of Anton and Preus (volumes II–V), and finally of Preus alone (volume VI). Compare, for instance, the ways Ashbaugh works closely and solely with primary texts to Fierro's deep involvement with the scholarship on *Phaedrus*, or Trelawny-Cassity's look to a range of texts from ancient Greek literature and modern philosophy with Wheeler's logical analysis of truth in Aristotle's *Categories*. These are just two comparisons that illustrate the range of approaches brought together in one book to honor Professor Preus. The full extent of this range might serve as a reminder of the diverse and expansive possibilities available within the field of ancient Greek philosophy.

While the scope of the volume's current 16 chapters is broad indeed, at one point in its development *Studies in Ancient Greek Philosophy: In Honor of Professor Anthony Preus* contained more than 20 proposed chapters, covering an even wider and more variegated range within—and beyond—the field. The spread of that moment in the volume's coming-to-be included studies of Zarathustran/Zoroastrian influence on ancient Greek thinking, but also on European philosophers such as Leibniz and Nietzsche. Among other studies that do not appear in the finalized volume but were present at an earlier moment, two more deserve special mention: a study of Xenophon's considerations of military virtue, and a comparative inquiry drawing together into fruitful dialogue Parmenides and twentieth-century philosopher of the Harlem Renaissance, Alain Locke, disclosing connections between Locke's "critical relativism" and Parmenidean ἀλήθεια. For various reasons and circumstances these proposals and some others did not materialize into papers for the collection; hopefully their authors will accept genuine thanks for their interest in the project and appreciation for their circumstances. Even in its current, slightly reduced form, the vast coverage of 16 chapters in a single volume such as this one still has advantages, especially for students at the advanced undergraduate and graduate levels, but also for working scholars who, in encountering such richly manifold studies in one book might formulate fresh insights and connections across and among the papers in the collection. While thematic volumes contribute importantly in focusing attention specifically on curated questions and areas of interest, non-thematized volumes open opportunities for readers to craft threads and shared interests through the multiple possibilities for arranging the chapters and bringing them into dialogue.

Hopefully, through continually expanding research and teaching in the area(s) of ancient Greek philosophy, and perhaps through continued lines of inquiry and

curriculum development that follow and are inspired by Preus' insight that Greek philosophy is "for the most part, a cultural product of the eastern Mediterranean" and the Near East with inextricable connections and influences in Asia and Africa (Preus 1992, 14–15), the appeal of studying and specializing in the area of ancient Greek philosophy will become even more inclusive and achieve still greater diversity.

Interdisciplinarity

The SAGP's goal to draw attention to, and support for, the interdisciplinary character of studies in ancient Greek philosophy overlaps with several broad inquiries in this collection that not only *highlight* the interdisciplinarity of scholarship on ancient Greek philosophy, but also widen the reach of that interdisciplinarity. In "Discovering φύσις: Reductive Materialism, the Emergence of Reflexivity, and the First Secular Theories of Everything," for instance, Naddaf calls on recent studies in evolutionary biology, neuroscience, and genetics, as well as historical and cultural studies and primary sources ranging from epic and lyric poetries to Plato, to address the question of philosophy's beginnings in archaic Greece. The whole gamut comes to bear on Naddaf's conclusion that the being to emerge in the Greek archaic period, which he terms *Homo philosophicus*, arises from a dynamic circle of mutually enhancing and transformative cultural and genetic developments that "changed the course of civilization in the West," developments that he stresses are not exclusive to Greeks (33–34). Taking guidance from Preus' thoughts on widening the scope of inquiry into Greek philosophy, Spitzer's chapter investigates images of totality from Persian, Mesopotamian, and Egyptian, as well as ancient Greek texts. Hahn's study of the Milesian philosophers Thales and Anaximander draws on a broad range of the resources in classical studies, including archaeology, ancient mathematics and technologies, history, to develop what he terms the "one-under-many" or *modular thinking* paradigm that orients early Greek philosophy, a paradigm he links specifically to the broader cultural developments in the sixth century BCE. Investigating the implications and necessary procedures for Thales' measurements of the pyramids in Egypt and Anaximander's use of a *gnomon* to map the inhabited earth, Hahn finds that both activities bear witness "not only to their proportional thinking but also their microcosmic-macrocosmic reasoning," both of which build on their grasp of "an underlying unity that alters without changing" (73). Trelawny-Cassity's chapter moves through a range of authors including Homer, Sappho, and Tyrtaios in its exploration of the ancient sense(s) of τὸ καλόν—which he finds to name in an irreducibly double manner *beautiful* and *noble*. The inquiry also turns to a twentieth-century interpretation of G. W. F. Hegel (1770–1831 CE) in order to disclose the relations joining desire, recognition, and τὸ καλόν (89–92), resulting in the insight that a "twofold desire" for what is attractive and for recognition "splits the καλόν" (93). In his study of Plato's *Gorgias*, Moore gathers from Thucydides, Aristophanes, Gorgias, and Lysias, to build out the meaning of φιλοσοφία/*philosophia* in fifth-century BCE Athens as involving

"in-depth conversation and reflection about doing well in life, personally or socially" (106), before returning to Plato's formulation of the term in the *Gorgias*. Even when attention is concentrated on a single text squarely within philosophy, as in Fierro's inquiry into the meanings and implications of Plato's use of εἰκός in *Phaedrus*, the text itself looks out beyond the disciplinary boundaries of philosophy, even if intending to elucidate those boundaries more effectively. Fierro follows those outward gestures in *Phaedrus* towards observations on legal discourse of the classical period, specifically those of the Attic orator Antiphon (ca. 480–411 BCE), in order to gain a view onto the ways in which Plato appropriates the use of εἰκός to be an access to truth "in a Platonic sense, that is to say, to the real essence of everything" (116).

The range of topics in this volume further exemplifies the interdisciplinarity *within* study of ancient Greek philosophy, what the SAGP's statement of aims refers to as the "interdisciplinary and intercultural dimensions" of the field. Emphasizing political thinking, Cortissoz undertakes a reading of Plato's *Republic* that seeks a resolution of the problems raised by the city-soul analogy: if the city is just on condition that each citizen is just, and if some citizens are primarily guided by desires (ἐπιθυμητικόν) in such a way that prevents their being just, then the city cannot be just (145–146). By attending to and building out a distinction between types (εἴδη) and manners (ἤθη), Cortissoz discloses a unity of virtues that involves "different δυνάμεις within the soul" (158). Examples concerning gender discrimination in the closing section bring the ancient text into proximity with contemporary social and political topics: since, as Cortissoz notes, it is difficult "to appreciate subtle mechanisms of discrimination" in contemporary contexts, the paper gestures beyond Plato, beyond the ancient world, and towards the important work towards a more just society "at every level," from education, to cultural production, to law, and more (159). Also centering an inquiry on Plato, Jelinek concentrates on *Phaedo*, developing an intervention on the metaphysics of Forms and the question of causation. Rather than understanding causation in terms of participation in a Form, Jelinek advances another interpretation that invokes both Forms and particulars in a manner that "treats each as an irreducible source of explanation" (171).

Within the vast sweep of Aristotle's work, Pellegrin seeks to locate *De Caelo* more adequately by asking whether, and in what way(s), that text constitutes a work in the study of nature. Ranging through Aristotle's works, including *Meteorologica*, *De Caelo*, *Posterior Analytics*, *Physics*, and their reception by Simplicius (sixth c. CE), the luminaries discussed in Simplicius' commentary (Alexander of Aphrodisias [second–third c. CE] and Iamblicus [third–fourth c. CE]), Ibn Rushd (aka Averroës, twelfth c. CE), and Thomas Aquinas (thirteenth c. CE), the very breadth of the inquiry's scope discloses a kind of inbuilt interdisciplinarity already active in Aristotle's philosophy. Distinguishing early in the study between two modes of carrying out inquiries into φύσις (often translated as *nature*,[1] perhaps better as *growth*), which Pellegrin characterizes as "formal and final, the other one material and mechanistic" while also articulating a combined or hybrid more "necessary for a 'complete' physics" (180),

Pellegrin shows how, in his considerations on motions, Aristotle sets up "a kind of conceptual framework" that shifts the inquiry away "from mathematical considerations to a physical analysis" (187), rendering *De Caelo* both a scientific and a physical treatise. In "Aristotle's Critique of the Proof of Indivisible Magnitudes," Miller focuses on the ἀπορία (he translates: *puzzle*) involving infinite divisibility in Aristotle's account and objection to atomism. By reference to the ancient commentary of Philoponus (sixth c. CE) and the introduction of a temporal aspect—simultaneity (ἅμα), Miller develops a distinction between "divisible *anywhere*" and "divisible *everywhere at the same time*" (197). With this distinction in play, Miller adduces aspects of Aristotle's geometry from *Physics* and *On Coming-To-Be and Passing-Away* (*De Generatione et Corruptione*) and clears the way towards a resolution of the ἀπορία and the insight that Aristotle discerned in the atomists thinking "a failure to understand the nature of points and magnitudes" (200).

The overlap of biological works and metaphysics sets in motion two of the volume's studies on Aristotle, each one further illuminating the interdisciplinarity of ancient philosophy. Olshewsky moves from *On Parts of Animals* to *Generation of Animals*, from *De Anima* to *On the Motion of Animals* and *History of Animals* in order to elucidate Aristotle's differentiation of male and female contributions to reproduction. Tracing an increasingly nuanced path through these works that runs from an apparent distinction based in male's form and female's matter in reproduction into a difference of actual or potential form—since matter "is always relative to an actuality" (206), Olshewsky turns to *Metaphysics* Iota and Aristotle's types of contrariety only to find that the path was a circle: the contributions of male and female seem to counter "the presumption of common species" (208). Yet Olshewsky notes that the progress along this path at least shows Aristotle thinking in a "more fluid" way than the paradigm of male-as-seed *acting on* female-as-(inert)-field, a "basis for the sexist attitudes of our current culture" (209). The range and interrelatedness of Aristotle's philosophy emerges, too, in Darovskikh's study of εἶδος in *Metaphysics Z*. With a specific book of *Metaphysics* as a focal point, Darovskikh makes his way through various biological works towards finding that εἶδος has multiple senses that call for both intensive and extensive reading. Primarily, through an intensive, close reading of the relevant chapters that coordinates εἶδος with other key terms οὐσία (often translated *substance*)[2] and τὸ τί ἦν εἶναι (often translated *essence*), Darovskikh argues that εἶδος names both species *and* individual form, that "*form* as species and individual forms are not two different concepts" (222). This insight builds on Darovskikh's extensive readings, notably *Categories*, *Posterior Analytics*, *On the Generation of Animals*, *Parts of Animals*, that both assist in articulating various senses of εἶδος and intervene on topics of scholarly dispute, such as whether an entity (οὐσία) is identical with its form (εἶδος).

In addition to the interdisciplinarity enacted in the studies engaged with Aristotle's biology and metaphysics, Mulhern's chapter, "Πολιτεία in Aristotle's *Nicomachean Ethics*," closely charts the movements of the term πολιτεία in *Nichomachean Ethics*. Mulhern develops a network of terms to translate the one

term, πολιτεία, more precisely, with a rootedness in the specific discursive contexts where it occurs. To build this network, the chapter turns to Homeric poetry, Herodotos, as well as to Plato's *Republic* and Aristotle's *Politics* and *Physics*, various translations, and the scholarly literature, particularly on the subject of the phrase κατὰ φύσιν in "the understood occurrence" of πολιτεία (233–236): ἀλλὰ μία μόνον πανταχοῦ κατὰ φύσιν ἡ ἀριστή (Arist. *Eth. Nic.* 1135a5). Mulhern finds that Aristotle's surrounding vocabulary, whether "language of sharing," of "being habituated," of "those who rule," or "looking ahead to using the word in its different historical senses" in *Politics* (239), guides readers into the most fitting understanding of πολιτεία in each case. This latter—the interlacing of the term through *Nichomachean Ethics* and *Politics*—shows again the disciplinary span and interconnectivity of Aristotle's philosophy.

Focused on *Categories* and *De Interpretatione*, Wheeler's chapter investigates questions concerning truth and falsehood: what is the relationship between λόγοι and ἡ ἀλήθεια? Can all λόγοι be true, or only certain types? What forms "the correlation between things in the world (πραγμάτα) and true and false λόγοι?" (243). From close attention to a specific passage in *Categories* (14b14–23), Wheeler finds that Aristotle considers true λόγοι those which are "single simple linguistic and mental assertions" (253). This insight paves a way towards an articulation of the relation between truth and "things in the world (πραγμάτα)," between Aristotle's thinking of assertoric truth in *Categories* to that in *Metaphysics*. In closing, Wheeler also signals toward additional lines of inquiry that would amplify "the mathematical underpinnings of the *Categories*" and the relations between *Categories* and *Metaphysics* (256).

The final chapter, reaching into the Hellenistic period, extends the volume's historical scope and its topical coverage. Thorp's study of Epicurus' theology evaluates the *realist* and *idealist* interpretations of Epicurean divinities. To approach the theology, Thorp opens inquiries into Epicurus' theory of truth, which involves considerations on the atomist, materialist cosmology entwined with Epicurus' conceptions of truth. The distinction Thorp makes between primary and secondary truth, where primary truth has to do with a person's perception of εἴδωλα (images) and does not admit of falsity, while secondary truth involves a distorted perception of an εἴδωλον that does not represent "a true grasp of the remote object" (261), and can be false concerning the relationship between the εἴδωλον and the "remote object" that is its source, bears importantly on the subsequent lines of inquiry. Working through a discussion of "three foundational items in his epistemology: sensations (αἰσθήσεις), *prolepses*, and feelings (τὰ πάθη)" (264), specifically πρόληψις ("kinds of clear generic images" [266]), Thorp returns to the question of the divinities and their relation to truth, concluding that "Epicurus can claim that the old gods are false, and the new gods—understood as living blessedly calm lives disengaged from petty concerns—are true" (270).

All told, a breadth of coverage in the volume's chapters spans very ancient texts, what might be called philosophy's prehistory (Burkert 2008/2009)—what Preus includes in the range of "wisdom literature" (1997, 239 with notes), through

the classical period and its central figures, and into the Hellenistic period. The approaches this volume gathers extend this range into Medieval and Modern philosophy and, of course, by way of engagement with the scholarly literature and linkages to topics of current interest, into the contemporary moment. These layers of historical breadth produce a vast chronological period—from approximately 3000 BCE to the present day—that incorporates a rich array of interdisciplinarity.

Studies and Society

Of the book's contributors, several have benefited from the encouragement promoted by the Society in the development of their chapters, having presented versions of their papers in SAGP venues. Miller, in person at the 2020 SAGP session of the American Philosophical Association Central Meeting in Chicago, and Darovskikh, remotely for the SAGP Annual Meeting in October of 2021, gained insights on their projects from presentations to the SAGP. That such venues continued and thrived during the pandemic is a result, as Tsouna observes in her foreword to this volume, of Preus' thorough and long-standing commitment to the advancement of research in the field of ancient Greek philosophy even in the midst of such global turbulence.

Similarly, some papers in this volume develop lines of inquiry that contributors have begun in other, related publications or presentations beyond the SAGP's immediate circle. Naddaf, for instance, first presented what is now the volume's opening chapter at a conference on Physics and Ontology in San Sebastian, Spain, in 2018. While developing and finalizing his contribution, Hahn made presentations of versions of his chapter at (virtual) conferences hosted or organized in Greece (Delphi), the US (Pittsburgh), France (Besançon), and the UK (London). On the way to his chapter, Spitzer formulated a related paper on archaic images published in the journal *Epoché*—a journal associated with the Ancient Philosophy Society.

Studies and society belong together, facilitating and enhancing the formulation of new research in the field of ancient Greek philosophy in ways that reach out beyond whatever apparent intra-disciplinary differences (e.g. of approach or method) might be present: as one expression of this, see Cortissoz's note of gratitude to Professor Preus (144). In its wide range of approaches and topics, *Studies in Ancient Greek Philosophy: In Honor of Professor Anthony Preus* enacts some aspects of the diversity and interdisciplinarity valued and promoted by the SAGP and contributes to the advancement of those important aims. Such contribution forms the most honorific feature of the collection, which was developed as a tribute to Professor Anthony Preus, Distinguished Teaching Professor of Philosophy at Binghamton University (SUNY), editor of the SUNY Press series in Ancient Philosophy, Secretary of the SAGP. Apart from a few notes of gratitude and appreciation in individual chapters, the studies collected here offer to Preus and his legacy, both as long-serving and steadfast secretary of the SAGP and as editor of the State University of New York Press' series in Ancient Philosophy (a role he assumed in 1986 and in which he continues to thrive at

present), a deeper and more far-reaching honor than surveys of his scholarship or encomia. Through rigorous and thoughtful encounters with a vast array of ancient sources, the contributors to *Studies in Ancient Greek Philosophy: In Honor of Professor Anthony Preus* show respect and appreciation for Preus in ways that enrich and advance the field of study his efforts have significantly shaped through the decades.

Translation

Without translation work on ancient philosophies cannot be done.

In a narrow sense, to study and write in English or any modern language on topics in ancient philosophy depends on translation(s), both in terms of the presentation of ancient material—whether by direct translation, paraphrase, or quotation from a published translation—and in terms of the manner of learning and developing skill in reading the ancient languages. If Thales traveled to Egypt and learned philosophy there, as reported in the Pseudo-Plutarchian *Placita Philosophorum* (Ps. Plut. *Plac.* 875e.3), translation will also have been implicated in Greek philosophy's own account of its inception.

More expansively, this relationship would encompass the histories of textual transmission including not only interlingual translations and the circulation, restoration, and preservation of texts, but also their transportation and the hospitable human relationships accompanying all of the former: the other side of exile, refuge, the welcoming and sheltering assistance where philosophy might continue, as in the case of Damascius' (462–538 CE) eastward flight from Athens (cf. Spitzer 2020, xii–xiv)—or where it might begin. While Thales may have been born in Miletos, other accounts suggest he traveled to the Ionian city, accompanying a companion who had been exiled from Phoenicia (Diog. Laert. I.1.22). Journeying and voyaging throughout the eastern Mediterranean during his self-imposed exile (Hdt. I.29), Solon, for instance, meets with such hospitality in Sardis, in the house of Croesus, who characterizes Solon's voyaging as φιλοσοφέων (Hdt. I.30.2). On another leg of that long journey of philosophy, Solon among Egyptians had "to be prepared to understand and accept what he is taught, and the teacher has to be prepared to communicate what he knows and understands," according to Preus' comments on the narrative in Plato's *Timaeus* (1992, 12): readiness to receive on all sides, along with a readiness to give, has some place in the ancient narratives of philosophy. Moreover, concerning the account of the encounter in *Critias*, Sallis has observed that, in creating an archive of whatever they had heard from the inhabitants of Atlantis, "there is good reason to suspect that virtually everything the Egyptian scribes wrote down would have been a translation, that the writings Solon was shown in Egypt were nothing but translation" (2002, 59)—which in turn undergo translation by Solon (εἰς τὴν ἡμετέραν ἄγων φωνὴν, Pl. *Criti.* 113b1). As one of what Preus terms "more profound truth" available in non-literal readings of myths, especially those concerning philosophy's origins (1998, 113), both narratives implicate translation for the progress of philosophy, whether in the form of communication by way of interpreters (translators) or in the form of

language learning and its associations with translation. Explicitly in the case of Pythagoras among Egyptians, language learning, and so some form and measure of translation, comes forward as part of his philosophical education (Diog. Laert. VIII.1.1–3). As the activities of the SAGP, and specifically of Professor Preus, illuminate—and as Preus himself suggested in his reference to the house of Polemarchus in his discussions with Tsouna for her foreword to this volume—this companionable, welcoming, and sheltering openness towards others constitutes an important dimension of philosophy. Here, too, in the relations of translation and philosophy, society and studies turn on a circle of reciprocity.

Broader and narrower senses of translation entwine. Even within the narrow sense of translation, philosophy depends on, but also makes philosophical headway through, translation. In Preus' study of ancient nutrition, for instance, an opening translation of a passage from Plato's *Gorgias* sets up a question as to how to make meaningful distinctions between ἐμπειρία and τέχνη specifically related to ὀψοποιία. The work towards such distinctions initially unfolds as sounding various translations of the latter term before moving beyond entries in a lexicon or specific translators' offerings and into passages from philosophic texts (Preus 2020, 2–3). Then, from Plato, Preus brings out the meanings of the other terms at issue: ἐμπειρία as both "a practice derived by trial and error," drawn from a passage in Plato's *Laws*, as well as a combination of "sense experience and memory," based on Aristotle's thinking in *Metaphysics*; τέχνη as "a disposition to apply true reasoning to production," which Preus builds by way of an "interpretive translation" of a passage in *Nicomachean Ethics* (2020, 3–4). The paper's longer sections that explore nutrition in Empedocles, Anaxagoras, and the text *On Regimen*, and then more thoroughly, the second book of the latter, depend on translations from Greek to English to deliver to English readers the range of the various species of animals and plants discussed in that text. By the study's end, after articulating types of knowledge that together form the τέχνη of nutrition in *Regimen*, the empirical (namely, the effects of certain foods on those who consume them) and philosophic (e.g. the elemental composition of foods), Preus returns to the distinction between ἐμπειρία and τέχνη. Building on the work that has involved translation in the earlier sections, Preus suggests that "the aim of the practice" might differentiate most significantly the two terms, with ἐμπειρία guided principally by "enjoyment and pleasure, without care for the lasting effects" and τέχνη, in contrast, chiefly oriented by "health and long-term physical well-being" (2020, 29). In this way the entangled threads of translation come to light, where the narrower sense (presentation in English of texts written in ancient Greek) is bound up with, and has an active part in, another sense of translation as a way towards formulating meanings.

An initial and seemingly mundane sense in which translation plays a vital role—the *narrow* sense of translation—can be found in Spitzer's chapter. Ranging over texts from diverse cultural and linguistic settings, Spitzer depends on translations of ancient Egyptian, Babylonian, Zarathustran, and *Upanishadic* texts in order to develop the interpretations through which the "images of totality" can be organized into "constellations" (40–41, 51). Yet even here, a richer sense

emerges in Spitzer's treatment of Theano (sixth century BCE; 48–50): when she is asked the meaning of Pythagoras' insight that "all things emerge in accordance with number," her answer takes place as a kind of translation—what Jakobson termed *intralingual* translation (2012, 127)—an interpretation that in different expression brings out a previously unknown dimension of the source under investigation.

Moore opens his chapter with an announcement that the transliteration *philosophia* intends to mark a difference between the practice in classical Greece and whatever contemporary determinations operate in the term *philosophy* (96). In this case, Moore's transliteration lets the Greek term approach English, brings it into nearness, while also activating the distance between the terms: *philosophia* and *philosophy*. This works to remind readers of their own interpretative lenses and embedded extant ideas and opinions concerning the meaning and activity of philosophy. Opening this zone where the study can attempt to articulate an ancient view involves both a refusal to translate—a moment of *non-translation* that nevertheless moves within the region of translation—and a commitment to translate through a patient investigation of the sources. Translating φιλοσοφία-*philosophia*, then, will not be a matter of finding the right word, but of letting its sense(s) come to attention throughout the entire work of the chapter.

Where Darovskikh's chapter recognizes ambiguities or several senses of Aristotle's use of εἶδος that could be translated along a spectrum "*from* form or shape *to* species, genus, kind" (220), *translation* differentiates for philosophic purposes, opens and explores the intricate differentiations within the term εἶδος itself. Pursuing the question of whether εἶδος registers a meaningful ambiguity as both *form* and *species*, Darovskikh finds that εἶδος in *Metaphysics* can be thought as the definable inner structure of an entity (οὐσία) and as a pliable, variable generality, a "species that is common to individuals but does not exist independently of them" (226). Along the way readers are guided through a network of Aristotle's terminology in ways that show how translation makes—to paraphrase and repurpose Aristotle's remark on the importance of habituation this way or that (*Eth. Nic.* 1103b23–25)—not a little, but rather all the difference.

Thorp, beginning from the several meanings—κατάληψιν (perception), δόξαν ὀρθὴν (right opinion), ἔννοιαν (conception), καθολικὴν νόησιν ἐναποκειμένην (universal thought gathered and stored)—given by Diogenes Laertius in his doxography (Diog. Laert. X.33), works towards a narrower and more rigorous sense of πρόληψις in Epicurean epistemology (264–267). Even as he develops a view that *prolepseis* plausibly indicate "a kind of clear generic images—concepts—that claim strong epistemic reliability," Thorp finds that this does not gain ground in the theological line of inquiry he has undertaken (266–267). Nevertheless, here too the task of translation forms the philosophic activity of this stage of Thorp's chapter (as it did, Thorp observes in passing, for Lucretius [266], and for Cicero, who offered *antipicationem* as a translation [Cic. *Nat. D.* I.44]), enabling him both to eliminate this epistemologically restricted sense of *prolepsis* from the investigation and to situate the question instead within the region of metaphysics.

Philosophy

Studies and society belong together. *Philosophy* and society belong together, as the organizing schema of teacher-student for Diogenes Laertius' doxography highlights: Anaximander-Anaximenes, Anaximenes-Anaxagoras, Anaxagoras-Archelaus, Archelaus-Socrates. Moore, in one of his investigations into the development of the term φιλοσοφία, has raised the possibility that the terms *philosophy* and *philosopher* themselves gained currency in fifth–fourth-century BCE Athens through the social connections, however distant, between Socrates and Anaxagoras. The latter was said to have been the first in Athens to have philosophized and, Moore suggests, served as a kind of paradigm for the term φιλόσοφος (*philosopher*) in the popular imagination and its implications "judged so dangerous as to merit a capital trial" (Moore 2016, 3§5). In this case, the practice is elaborated by way of the sociality of education and the characterization of that practice overflowing the grasp of its practitioners into a wider social and political network. Both pathways implicate philosophy and society in their togetherness.

The ancient genre of *dialogue* similarly emphasizes the belonging-together of philosophy and society both formally, in its crafting of multiple speakers engaged in conversation, and socially insofar as reading took place as commonly a shared, social activity into the classical period—as the scenes of reading in Plato such as *Parmenides*, *Theaetetus*, and *Phaedrus* illustrate—and beyond: centuries after Plato, not only does Augustine (354–430 CE) remark on Ambrose's silent reading as if unusual, his comments illustrate that reading aloud still bore a kind of invitation, either for elucidation or disputation, to "a hearer interested and intent on the matter" (Aug. *Conf.* VI.iii.3; trans. Chadwick 1991, 93). From the belonging-together of philosophy and society Heraclitus of Ephesus (late-sixth century BCE) calls on others to *listen* (ἀκού-) to λόγος:

> Logos *is* ever, ever humans ignore it, before hearing [ἀκοῦσαι]
> and after having heard [ἀκούσαντες]. All follows logos, but humans,
> impractical, practice words and deeds in disarray.
> I array all, seeing in each its nature and saying how it is.
>
> (DK B1)

> Listening [ἀκούσαντας] not to me but to logos,
> it is wise to recognize that all things are one.
>
> (B50)

> The ignorant neither listen [ἀκούσαντες] nor attend.
>
> (DK B34; trans. Hix 2015, 9–10; my interpolations)

The stress is emphatically on the sociality of discourse, of thinking, and the twofold (or manifold) of speaking and listening embedded in both. Similarly, Parmenides (late-sixth–early-fifth-century BCE), within a poem that begins from a scene that emphasizes togetherness, vulnerability, and care (DK B1),[3]

and that unfurls for the most part as an implicit dialogue[4]—or, at least, thoughtful encounter—between Thea and the first-person narrator, stages the togetherness, the sociality of thinking and philosophy: "Come, I will speak (ἐρέω), and you, hearkening to a traditionally arranged speech (μῦθον ἀκούσας), gather it into your care (κόμισαι)" (DK B2.1; my trans.). The poem not only stresses, as Nightingale has observed, "discourse and hearing rather than spectating or seeing" (2001, 28–29), but also and more thoroughly generates an atmosphere of figures and images that "never once assumes a situation of books and readers, but always of reciters and listeners" (Havelock 1982, 248). This emphatically social character might form another way in which earlier poetic traditions overlap with philosophy; as Odysseus observes, listening in fellowship to a poet's divine voice (θεοῖς ἐναλίγκιος αὐδήν) is something beautiful (καλὸν; Hom. *Od.* IX.3–4).

Looking towards the beginning of Greek philosophy, Naddaf adduces a broad range of sources in his formulation of conditions that stimulated and enabled the concomitant rise of reflexivity and philosophy. Among these the πόλις, the Greek city-state whose "central square or public space called the ἀγορά" afforded opportunities for the adult male population to participate directly in deliberations over topics of shared concern (32–33). In light of the conditions Naddaf covers, the primary sense of philosophy in his study comes forward as an orientation according to which "we should never be bound to uncritical acceptance of a particular explanation" and "characterized by thinking for oneself, engaging critically with one's peers" (24, 28). The latter two elements of this formulation belong together, where "thinking for oneself" emerges through listening and critical responses to others.

Also addressed to the beginning of Greek philosophy, Hahn's chapter proceeds with a goal of better understanding what he takes to be the beginning insight, that "the earliest philosophers regarded the world of apparent multiplicity as an illusion, that hidden within the diversity we experience—contrary to our common-sense—we could nevertheless discern a single underlying nature" (57). The relevant context for Hahn is that of sixth-century BCE technologies, specifically those associated with the Milesians: temple architecture, coinage, industrial wool felting. Looking more closely to the use of a *gnomon*, Hahn draws on his own experience and records from the numerous field studies he has led to Egypt to illustrate Thales' measurement of the height of a pyramid at Giza using the *gnomon*. Hahn then shows how Anaximander used the *gnomon* in both calendric and geographic applications. Throughout the study Milesian philosophy emerges as a kind of double-groundwork: groundwork in the sense of being in the field among the built environment, taking the measure of things by sharing their place, their ground, and setting to work upon it; groundwork, too, in the envisioning of an "interpenetrating structure" joining "all appearances" and the accompanying "microcosmic-macrocosmic reasoning" (62, 73). As this sort of double-groundwork philosophy in Hahn's work has something like an interdisciplinarity at its inception as well as a bond of collegial relationships through which the early Milesians could carry out their fieldwork.

Several chapters are moved by, or address, the task(s) of philosophy in the works of Plato. In an investigation into accounts of philosophy's beginning, Preus has noted a way in which the dialogues of Plato operate as a "paradigm case" and have offered "almost an ostensive 'definition' of philosophy since their composition," giving philosophy "a conceptual thickness that it has not lost in the intervening 2400 years" (1998, 113). Jelinek's chapter, in raising possible objections and replying to them, creates a dialogic atmosphere and the attendant *thickness*, also richness, spanning and connecting various moments of a tradition. After presenting objections and adducing reasons in support of those objections, usually by way of references to other scholars, Jelinek proceeds to develop replies to the objections, also replete with scholarly citations and textual evidence. In this sense her text formally resembles a Medieval way of thinking unfolded, for instance, by Thomas Aquinas in *Summa Theologica*, which, in its turn, resembles Plato's dialogues in the invitation for "audience participation" (Regan 2000, xxii).

In his study of *Gorgias*, Moore finds that dialogue unique in its enactment of the specific character of *philosophia* that is articulated and endorsed within the dialogue (106–107). This mode of *philosophia* involves not only striving for understanding beyond "mere convention to more foundational layers," a purpose and value on which Socrates and Callicles agree, but also a desire to continue inquiry, even through increasingly finer distinctions, towards its end in clarity and σοφία (102), to heed "the call of philosophia" by restoring the human relations that enable it, the interlocutors engaged in their shared pursuit (107).

One of philosophy's tasks as Fierro unfolds it in her chapter on *Phaedrus* has to do with the production of images or resemblances or likenesses (τὸ ἐικός) for a variety of reasons: epistemic limitations of the speaker, or the hearer, or of human beings in general (121). Philosophy itself, as "the face-to-face dialectical exchange and the Platonic dialogues as an image of it" becomes in a sense something εικός, an image of "the full noetic knowledge of the eidetic realm which is only available to the gods" (125). Here, too, philosophy's own work remains primarily located in a social engagement, an involvement with others.

Ashbaugh's reading through multiple dialogues of Plato—with sustained attention to *Protagoras* and *Meno*—both advances and enacts a view of philosophy as *energeia* more than *ergon*. Writing of the tone and mode of dialogic inquiry with Socrates, Ashbaugh observes that "every claim is presented for examination, every claim is provisional, and nothing gets settled once and for all" (135–136). Important implications might flow from this orientation to inquiry: if provisionality suffuses dialogue, how then does one read and teach *Plato*? Can *teachings*—if understood as settled principles or doctrine—be identified? If so, which teachings are attributable to Plato? Or, is the principle teaching to continue a shared quest, echoing Xenophanes' statement that "seeking in time mortals discover better" (DK B18; my trans.)? So thoroughly infused with multiple characters (with their own resonances) as well as polyvalent images, figures, and myths, the task asks much of readers; as Stanley Rosen phrased it, "one must be a poet as well as a philosopher in order to determine what are the Platonic arguments" (1988, 11). Perhaps, or perhaps a student of poetry or drama, literature more broadly, might

also be able to make such a determination. It may be, too, that such determination matters less than becoming involved in the searching orientation of dialogue. Ashbaugh's presentation and reading of Socrates' own narration in *Protagoras* (137) might be suggestive of the way(s) Plato's dialogue-as-form might be meaningfully engaged. The multiple textural dimensions of dialogues seem to strive for what Ashbaugh notes as a philosophical concern that reasoning do no harm to the other elements of the soul (136), including introducing pleasure to the very work of philosophy. Exhilaration, joy, the body "radiant with pleasure" she notes in Socrates' demeanor at the opening of *Protagoras* (136)—Ashbaugh's attention to these aspects of philosophic practice can inspire teaching of philosophy that *does* philosophy with appropriate interest in the participants' embodiment, affect, and sense of togetherness. Even, that is, as the practice of philosophy Ashbaugh unfolds requires, at minimum, a certain distance within which reflection (and reflexion) and engagement with ideas becomes available (130), it also seems to summon a complementary nearness, proximity, belonging.

This togetherness of philosophy and society spills over into a broader zone of belonging via what Ashbaugh has elsewhere termed the "perceptual faith" grounding inquiry, the "wild link with the world" that constitutes beginning and end of philosophy (1978, 222–223), a circuit already voiced at the Greek beginning, both as the lyre or the bow in their backward-turning (Heraclitus DK B51) and in the figure of the circle:

> joined (ξύνον) beginning and end on the circle (Heraclitus, DK B103; my trans.)
> joined (ξυνὸν) with me is
> from where I will begin, to there again
> and again I will return
>
> (Parmenides, DK B5; my trans.)

The circle's arc passes through others, encircles each thinker in the world, compasses "the whole of human history and projects meaning ahead" (Ashbaugh 1978, 225), though indeed not as simply transparent objects for contemplation, but as depths, densities, thicknesses, absences (217, 219, 222).[5] Unlike the (purely) divine (e.g. Arist. *Metaph.* Λ 1072b), human thinking and the practice of philosophy achieve a better condition among others, among colleagues (συνεργοὺς; *Eth. Nic.* 1177a 27–35), among friends, our other selves (ἕτερος γὰρ αὐτὸς ὁ φίλος ἐστίν) whose being comes into awareness through the pleasures of sociality (συζῆν καὶ κοινωνεῖν)—discourse and thought in togetherness (1170b 5–12)—towards "a becoming oneself most fully, precisely in responsiveness and non-self-enclosure" (Baracchi 2012, 117). Responsion and the opening towards others—and towards the very nearness of otherness (τὰ πρόχειρα τῶν ἀτόπων) activating the wonder (θαυμάσαντες) that animates thinking (Arist. *Metaph.* A 982b11–21),[6] "the outbreak of the extraordinariness of the ordinary" (Sallis 1995, 258)—directs attention to the *loving* (φίλος) element guiding a name for such open-awareness unfolded in togetherness as φιλοσοφία, *philosophy*.

Narrowing in on a description of *philosophy*, Preus eliminates from a sound description the notion that philosophy is constituted by a set of beliefs, or books, or "a secret technique," arriving at philosophy as a kind of inalienable orientation:

> Philosophy is more nearly a condition of mind, an attitude, a desire. How can we *steal* a desire from someone else? At most we might dream of stealing the means of satisfying that desire from another, but since those means are completely intellectual and immaterial, not even the satisfactions of those desires can be stolen. Like love, they may be shared. Philosophy is the common heritage of human beings as rational entities.
>
> (1992, 13–14)

In part, Preus was responding to claims that philosophy was stolen from Egyptians by Greeks. The statement's resonances, however, exceed an engagement with a single text or school of thought. From certain critical points of view, aspects of this description might be challenged, interrogated, refuted, but such critical engagement itself would highlight and reinforce one of the more enduring and far-reaching aspects of this statement—which is already 30 years old at the time of this introduction, and so should not be taken as a definitive position set out by a still active scholar and teacher: namely, the emphasis on *sharing*, the relationality implicit in Preus' association of philosophy and, embedded in the very term itself, love.

Notes

1 But on the limitations and problematics of translating φύσις as *nature*, see in this volume Naddaf's observations that φύσις encompasses "the whole process of the growth of a thing from its birth to its maturity" (25 with references), as well as Mulhern's note and references on *growth* as a sound and more fitting translation (235–236). Elsewhere, Mulhern expands on this and gives fuller references, noting that in the word *natura*, from *nascor/natus*, "the sense of becoming, or growing, associated with the Greek γίγνομαι (*geno, gigno*), has been largely overcome by the sense of being born" (2020/21, 29).
2 See Darovskikh's note on the translation of οὐσία (216n. 8).
3 The first-person singular narrator, guided by the female horses of the opening line (and whose name [ἵπποι, DK B1.1] commences the whole poem) is strained to the limits when assistance arrives in the form of the Heliades (DK B1.8–21), who are, in turn, assisted by the gate-keeper (DK B1.14–20).
4 Mourelatos (1970, 174) reformulated a specific passage of the Parmenidean poem in dialogue form (DK B8.38–41).
5 That is, this "wild link" encompasses human history not in the manner of an accumulation of historical knowledge, but rather in the sense that it belongs to and is equiprimordial with human being, so that a history of being human will already turn on-as-in this circle.
6 Animates, that is, thinking's flight (φεύγειν) from wonder, aligned by Aristotle here with ignorance (τὴν ἄγνοιαν). As McNeill has suggested, "it could be that an originary *thaumazein* was precisely what died out when philosophy entered the scene" (1999, 3). For an insightful discussion of such a flight from wonder, see Sallis (1995, 246–248).

Bibliography

Ashbaugh, Anne Freire. 1978. "The Philosophy of Flesh and the Flesh of Philosophy." *Research in Phenomenology* 8: 217–23. JSTOR. http://www.jstor.org/stable/24654297.

Baracchi, Claudia. 2012. "Aristotle on Becoming Human." *Tópicos* 43: 93–121.

Burkert, Walter. 2008/2009. "Prehistory of Presocratic Philosophy in an Orientalizing Context." In *The Oxford Handbook of Presocratic Philosophy*, edited by Patricia Curd and Daniel W. Graham. Oxford: Oxford University Press. *Oxford Handbooks Online*. 10.1093/oxfordhb/9780195146875.003.0003.

Burnet, John, ed. 1902. *Platonis Opera*, vol. 4. Oxford: Clarendon.

Chadwick, Henry, trans. 1991. *Saint Augustine: Confessions*. Oxford: Oxford University Press.

Gallop, David, ed. and trans. 1984. *Parmenides of Elea: Fragments: A Text and Translation and Introduction*. Toronto, Buffalo and London: University of Toronto Press.

Havelock, Eric A. 1982. "Pre-Literacy and the Pre-Socratics." In *The Literate Revolution in Greece and Its Cultural Consequences*, 220–260. Princeton: Princeton University Press.

Hix, H. L. 2015. "Fire at Night: A Version of Herakleitos." *The Yale Review* 103, no. 2: 1–15. https://doi.org/10.1111/yrev.12242.

Jakobson, Roman. 2012. "On Linguistic Aspects of Translation." In *The Translation Studies Reader*, 3rd edition, edited by Lawrence Venuti, 126–31. London and New York: Routledge.

Lesher, J. H., ed. and trans. 1992. *Xenophanes of Colophon: Fragments: A Text and Translation and Introduction*. Toronto, Buffalo and London: University of Toronto Press.

McNeill, William. 1999. "Introduction: Of an Ancient Desire." In *The Glance of the Eye: Heidegger, Aristotle, and the Ends of Theory*, 1–13. Albany: SUNY Press. EBSCOhost.

Moore, Christopher. 2016. "Anaxagoras, Socrates, and the History of 'Philosophy'." *CHS Research Bulletin* 4, no. 2. http://nrs.harvard.edu/urn-3:hlnc.essay:MooreC.Anaxagoras_Socrates_and_the_History_of_Philosophy.2016.

Mourelatos, Alexander D. P. 1970. *The Route of Parmenides: A Study of Word, Image, and Argument in the Fragments*. New Haven: Yale University Press.

Mulhern, J. J. 2020/21. "Φύσις in Aristotle's *Politics*." *Society for Ancient Greek Philosophy Newsletter* no. 2: 29–37.

Nightingale, Andrea Wilson. 2001. "On Wandering and Wondering: 'Theôria' in Greek Philosophy and Culture." *Arion: A Journal of Humanities and the Classics* 9, no. 2: 23–58.

Preus, Anthony. 1992. *Greek Philosophy: Egyptian Origins*. Binghamton: Institute of Global Cultural Studies of Binghamton University.

———. 1997. "Wisdom Texts and Philosophy." *Tópicos* 13, no. 1: 237–54.

———. 1998. "Thoth and Apollo: Greek Myths of the Origin of Philosophy." *Méthexis* 11: 113–25. JSTOR. www.jstor.org/stable/43738568.

———. 2020. "The Techne of Nutrition in Ancient Greek Philosophy." *Archai* 29: 1–34.

Regan, Richard J. 2000. *Introduction to Aquinas: Treatise on Law, xiii–xxiii*. Indianapolis: Hackett.

Robinson, T. M., ed. and trans. 1987. *Heraclitus: Fragments: A Text and Translation with a Commentary*. Toronto, Buffalo and London: University of Toronto Press.

Rosen, Stanley. 1988. "The Quarrel between Philosophy and Poetry." In *The Quarrel between Philosophy and Poetry: Studies in Ancient Thought*, 1–26. New York and London: Routledge.

Sallis, John. 1995. "…A Wonder that One Could Never Aspire to Surpass." In *The Path of Archaic Thinking: Unfolding the Work of John Sallis*, edited by Kenneth Maly, 243–74. Albany: SUNY Press. EBSCOhost.

———. 2002. *On Translation*. Bloomington and Indianapolis: Indiana University Press.

Society for Ancient Greek Philosophy. 2022. "Who We Are: Our Aim." https://societyforancientgreekphilosophy.org/who-we-are/#our-aim.

Spitzer, D. M. 2020. "Introduction: Philosophy's Treason." In *Philosophy's Treason: Studies in Philosophy and Translation*, edited by D. M. Spitzer, v–xxix. Wilmington: Vernon Press.

1 Discovering φύσις

Reductive Materialism, the Emergence of Reflexivity, and the First Secular Theories of Everything*

Gerard Naddaf

Introduction

In contemporary science and philosophy, the orthodox view is to consider "reductive materialism" the only legitimate way of accounting for all things past, present, and future—for, that is, what some may call "theories of everything." According to this view, all psychological phenomena, including mind, life, and consciousness, are also reducible to physics and chemistry.

In his controversial but important book *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False* (2012), Thomas Nagel argues that "reductive materialism" and a purely materialist Darwinian conception of nature cannot account for an expanded picture of the natural order which would accommodate "the appearance of living organisms [that] has eventually given rise to consciousness, perception, desire, action, and the formation of beliefs and intentions on the basis of reasons" (2012, 32)—an accommodation it must provide in order to give a truly complete account of the history of the universe. Whence the subtitle of the book: *Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False*. But Nagel is also an atheist, so he'll have nothing to do with the theistic option and its contention that the intentionality of a purposive being is at work behind the present order of things. Nagel argues instead for a special kind of teleology that he calls "natural teleology" as the only valid explanation. The existence of teleological laws means that certain physical outcomes have a much higher probability than the laws of physics alone would allow because they are on a path toward certain results. Natural teleology would be, among other things, a biological theory. It would explain not only the appearance of physical organisms but also the development of consciousness, cognition, and value in those organisms as something to be

* This paper is a revised version of an invited talk for the XIII International Ontology Conference on Physics and Ontology in San Sebastian, Spain, 2–6 October 2018. The paper was meant for a wide audience of philosophers and scientists. I thought it a suitable paper to contribute to my esteemed colleague, Anthony Preus, who always had something insightful to say during conference presentations. Moreover, Tony played an important role in my own scholarly career. He was always there when you needed him.

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expected. In sum, given the inadequacies of both reductive materialism and theism, and the impossibility of abandoning the search for our own place in the universe, Nagel favors a "naturalistic understanding that avoids psychophysical reductionism" (2012, 32).

What interests me with Nagel's proposal is that we find a historical precedent for it at the origins of philosophy and science in what is called the discovery or invention of nature or *physis*. When we turn to the history of philosophy before Aristotle, we see that this natural teleology, to borrow Nagel's expression, led some thinkers to affirm reductive materialism, which in turn generated, as a reaction to it, theism as a philosophical position, a theism grounded in *argument*s for the existence of God/gods. In other words, there were no arguments for the existence of God before a case was made for atheism. In this battle of Titans, the concept of nature or *physis* is at the center of the controversy, and the political and social ramifications were as acute then as they are now. But if there was one agreement among all the natural philosophers in the controversy, and I'll include Plato among them, it was that reason (*nous* or *logos*), and not faith, should be the ultimate arbiter.

In this paper, I want to introduce the different parties in the dispute, and to their terms of reference. But this paper will also have something to say about the emergence of a new form of thinking, if not a new kind of *Homo*: the advent of *Homo philosophicus*, and the self-conscious reflexivity this being presupposes. Indeed, this paper is also engaging with the origin of Western philosophy and science, the origin of which was once considered a miracle of sorts, and on which there is still no consensus, and yet it is inseparable from the genesis of the Western subject or mind. Since there is now a wide consensus that cultural development can have a determining effect on biology and thus on the human genome (e.g., cooking food changed the human anatomy),[1] I'll propose that there may have been a genetic mutation behind this new form of conscious reflexivity without which Western philosophy and science as understood here would not have seen the light of day. In this way the paper might also be useful to cultural and biological anthropologists, evolutionary and cognitive psychologists, neuroscientists and the like, who seem unaware of the new mindset behind the Greek enlightenment. The primary cultural factors behind the phenomenon, factors that did not exist elsewhere, and thus possible factors behind the genetic mutation, will also be discussed toward the end of this paper. Meanwhile, I'll be working chronologically backward rather than forward to show that natural teleology, as Nagel understands it, is at the foundation of early Greek philosophy.

Plato

The place to begin is Book X of Plato's *Laws*, Plato's final and longest dialogue, where we find the first arguments (λόγοι) in Western philosophy for the existence of God or gods, and in conjunction, the first arguments for the priority of mind (νοῦς) and soul (ψυχή) over matter. In the *Laws*, Plato replaces the legendary philosopher kings of the *Republic* with the rule of law itself—but with laws

considered as objective and timeless truths (Pl. *Leg.* 772c; 798b1, 846c7 etc.); they are immutable, like the cosmic principle governing the movements of the heavenly bodies (822a), and they play a crucial role in Plato's arguments for the existence of God and divine providence.

Plato maintains, as he does in the *Republic*, that the ruling element in the state should still rule over men, but in the *Laws* this ruling element is reason (νοῦς), a divine spark within us; and laws (νόμοι) are understood as "the divine dispensations of reason" (*Leg.* 714a). The idea is that since νοῦς or reason is the immortal element in humans, its enactments are divine. The νόμοι or laws will thus be the real sovereign of the state. This explains Plato's remark that all citizens must be slaves or servants to the laws (715c–d). Unsurprisingly, θέος and νοῦς are used interchangeably (713a), such that theocracy and noocracy and by extension nomocracy, mean the same thing.

Until *Laws* X, there is no indication that the divinely inspired law code would be confronted with any serious opposition. Indeed, no one would voluntarily commit an unholy act in word or deed, Plato insists, unless they disbelieve in the existence of the gods, or believed that the gods exist but do not care for us, or that they are corruptible (885b). We learn that there are different groups of individuals who maintain these three heresies. Plato argues that these individuals would not be satisfied with anything less than a demonstration (ἀπόδεξις, 887a, 893b; ἐπίδεξις, 892c, 899d), based on arguments (λόγοι, 887a) that would be acceptable to all. He is well aware that his young (νέοι) adversaries would never accept the notions of a demiurge, eternal forms, or any claim to recollection as we find in Plato's *Timaeus*, the quintessential creationist cosmogony. Moreover, Plato describes his young adversaries as being gifted with strong memories and shrewd wits (μαθήσεις ὀξεῖαι, 908c3). And to insist on the fundamental importance of his enterprise, Plato contends that his arguments against the three forms of impiety would constitute the best and finest preamble the entire legislation (ἁπάντῶν τῶν νόμων) could have (887c1–2).

Plato contends that the youth have been led astray by a "surprising theory" (θαυμασὸν λόγον, 888d9), which argues that the present order of things emerged by chance (τύχῃ) from four primary inanimate (ἀψύχων) elements or principles: earth, air, water, and fire (889b). This is what his adversaries understand by φύσις (891c). This is the first account of what Nagel calls "reductive materialism" and the atheism to which it leads.

According to Plato's report, the cosmogony of the reductive materialists evolved as follows. At point zero there are four "inanimate" or "soulless" (ἄψυχα) primary substances (earth, air, fire, and water). These move by chance, each controlled by its own inherent properties or powers (δυνάμεις). And it was chance too that brought the elements with some kind of affinities into contact (e.g., hot and cold, wet and dry, soft and hard). It is through the chance combinations of these "lifeless" amalgamations that the earth, sun, moon, and stars, that is, the heavens as a whole and everything in them, came into being (889b–c). Plants and animals, including humans, are also the products of nature and chance (889c). More precisely, it was the establishment of the seasons (ὥραι) that led

to the appearance of living things (889c4–5) and, I assume, soul (ψυχή), which Plato connects with life (895c).[2] The theory insists, and Plato emphasizes it, that the grand and primary works of nature (φύσις) owe their existence not to the mind (νοῦς) of a deity (θέος), nor to any design (τέχνη), but simply to nature and chance (φύσις καὶ τύχη, 889c6). It naturally follows from this reductive materialist theory that legislation and its enactments are entirely artificial rather than dispensations of divine νοῦς (889e), and the gods themselves are a matter of human conventions (889c–890a).

Meanwhile, in order to demonstrate divine existence and providence—the true guarantors for the state and its laws—Plato has recourse to versions of two famous arguments: the cosmological and the physico-theological/teleological. He is the first to employ them. Plato uses the cosmological argument to show that the soul (ψυχή), which his adversaries hold to be a product posterior to the four elements, is in fact *prior* to them. Indeed, Plato, who understands by φύσις the primary source of generation (as do the materialists [892c]), connects φύσις more with soul than with the four soulless (ἄψυχα) elements.

Soul (ψυχή) is movement that moves itself, and only such a movement can be the primary source of generation; for it is prior, in existence and in dignity, to use Plato's terminology, to the series of movements transmitted by bodies (894d; 895b). Consequently, if all of his predecessors maintained the universe really was generated, for Plato it is impossible that the present order of things was able to emerge from its initial state without the initial impetus of a moving principle, a principle which is identified with φύσις as ἀρχή (first principle or cause) and which, if it were to cease to act, would bring about the end of the universe (895a5–b1). In short, without soul, the primordial state of things would forever remain inert.

However, this first argument is not sufficient, for soul is not the supreme principle that Plato has in mind when he thinks of "god." Soul is neutral and as such it is susceptible to good or evil depending on the circumstances. Now since god or the divine is by nature good, Plato must determine which principle will assure, in a permanent way, the goodness of the soul. This principle, Plato argues, is νοῦς (mind), which is exhibited in the harmony it establishes and sustains in the visible motion of the natural world (897b–898b; 966e).

This, however, remains to be demonstrated, and doing so is precisely the aim of the teleological or physico-theological argument. For Plato, this demonstration depends essentially on one thing: its ability to prove that the movements of the heavenly bodies are of the same nature of those of νοῦς, that is, circular, uniform, and constant (898a–b).

This is contingent on what Plato calls the new astronomy. Observational astronomy reveals that the movements of the heavenly bodies are not regular but wandering. Mathematical astronomy, on the other hand, can show that the heavenly bodies move in circles or, what amounts to the same thing, intelligently. In the *Laws*, Plato affirms that the paradox of the irregular motion of bodies has only recently been resolved thanks to the new astronomy (821e).[3] Plato goes as far as to claim that astronomy—a science he now claims is "noble, true, beneficial

to society and completely acceptable to God" (821a–b; also, 966e–977c)—should be *compulsory* for all citizens to study to some degree from their youth precisely because it is a demonstration of teleology grounded in intentionality. In sum, it demonstrates that it is the ἀρίστη ψυχή or "best soul" (identified with god) which cares for the entire universe (879c, 898c). Plato also suggests here, as he explicitly noted in the *Timaeus* (*Ti.* 38b–c, 47a–c), that the ἀρίστη ψυχή via the regular and uniform motions of the heavenly bodies has given us the ability to invent number, which in turn led to the notion of time and with it the road to investigating the nature of the universe and, indeed, the gift of philosophy itself. So, for Plato, it is not by chance that nature has given rise to conscious beings with minds and to be such that it is "comprehensible to such beings," to borrow an expression from Nagel (2012, 17).

We have now reviewed the first historical account of reductive materialism and Plato's corresponding arguments in favor of theism. There is a considerable controversy on the origin of Plato's reductive materialist account in *Laws* X. In my opinion, this theory belongs to no one in particular but seems to be an amalgamation of different theories in circulation at the time. David Sedley has recently argued that Plato was more probably summarizing a thesis that was circulating in the late fifth century† and published anonymously to avoid prosecution for impiety (2013). What is certain is that the theory makes claims that are not found in other Presocratic natural philosophers, and it is to these, and in particular, the earliest of these, to which I now turn.

I'd like to begin with a reminder of Nagel's thesis. As an atheist, Nagel will have nothing to do with the theist option, and he is convinced that reductive materialism cannot account for an expanded conception of the natural order which includes the appearance of living organisms that possess consciousness, cognition, and value, which a "complete account" of the universe would provide (2012, 32). Let me note his claim that "the possibilities [of consciousness, cognition and value] *were* [therefore] *inherent* in the universe long before there was life, and inherent in early life long before the appearance of animals" (32; my emphasis and interpolations). He thus argues for natural teleological laws working on a universal level *in addition to* the laws that govern the behavior of physical elements (66ff).[4]

I see this third "secular" option advocated by Nagel as similar to what we find at the origins of philosophy and science, and reductive materialism as the culmination, so to speak, of the theories of the natural philosophers from the Milesians to the atomist Democritus of Abdera. In this paper, I will only cover a certain number of highlights as they concern the Milesians,[5] and Anaximander, in particular, but I'd like to begin with a few words on consciousness.

† Throughout, all dates are BCE unless otherwise specified.

Consciousness and the Reflective Self

Theories of consciousness abound. Indeed, there is no consensus on what it is or how it originated. But no one contests the importance of seeking an answer. At the end of *The Origin of Creativity*, the biologist E.O. Wilson claims that the grail to be sought in philosophy and science "is the nature of consciousness and how it originated," for it is inseparable from understanding the meaning of humanity (2017, 197). The neuroscientist Antonio Damasio, who, like Wilson, would also fall into the reductive materialist camp, reminds us that without it "you would have no way of knowing that you exist, let alone know who you are and what you think" (Damasio 2012, 4). Some argue that the phenomenon of consciousness is what distinguishes humans from other living things, but most scientists and philosophers alike, including Nagel, understand consciousness as a phenomenon that *predates* humans and so it is not unique to them. Moreover, Nagel sees mind and its cognitive abilities as a higher form of consciousness the seeds of which were also there at the outset. I believe that all the contemporary protagonists—theists, reductive materialists, and natural teleologists—would agree that different but related kinds of selves (as they concern humans) have evolved over time.[6]

Interestingly, the Latin word *conscientia*, from which we derive our word "conscience" and "consciousness," means "to know together" or "knowledge within oneself" or "to know within one's own mind" (*OED* s.v. consciousness). The etymology, as Agnes Heller notes, indicates that the role played by knowledge in the construction of this feeling is intimately connected to the activity of a reflective self-consciousness (2003). I'd like to argue—although I can only touch on the mere basics here—that reflective self-consciousness is a form of consciousness and self that developed late, and that it was a product or consequence of a certain number of factors that were proper to ancient Greece, notably the alphabetic script and the polis, and this is the catalyst behind an enlightenment that generated Western philosophy and science and changed the direction of humankind, at least as it concerns the West. It is relevant to this paper insofar as the first philosophers, as I will show, were what Nagel would call natural teleologists. But I want to take this thesis a step further and argue that the factors mentioned above in conjunction with others may have occasioned a genetic mutation that gave rise to a reflective self, a new kind of *Homo*, *Homo philosophicus*, if I may. This new kind of self is manifested in reflexivizations or reflexive pronouns that didn't exist before then, at least in ancient Greece.[7]

There is wide consensus among specialists in cultural and biological anthropology, evolutionary and cognitive psychology, neuroscience, genetics, and related disciplines that human culture has a determining impact on human biology and genetics. Indeed, empirical evidence from genetics suggests that culture has long shaped our genome (Laland, Odling-Smee, and Myles 2010). The anthropologist John Hawkes et al. have argued that while the human genome may be changing at a faster pace over the past 80,000 years and accelerating as evidenced not only in population growth and adaption to new environments but also in cultural development, human intelligence strictly speaking has not changed

considerably (Hawkes et al. 2008; see also Boyd et al. 2011). What is in our genes is to learn from others, which is interestingly intimated in the etymology of the word conscience. It's all about information sharing as human psychology does not permit "cumulative" cultural evolution.

These specialists, however, have given little if any thought to the phenomenon of Greek philosophy and the new mindset that characterizes it. More to the point, Greek philosophy changed the direction of human thinking to a more critical and open-minded way of seeing the world, and there is nothing similar, as I hope to show, that we encounter in other societies until then. Indeed, shortly after the emergence of this new kind of consciousness and self, we find a conscious, critical approach not unlike what we find in contemporary science: we should never be bound to uncritical acceptance of a particular explanation. This explains the plethora of new and competing ontologies about nature or φύσις that arose at the time and were without historical precedent.

In this regard, I'll begin with the correlation between the discovery of φύσις and the emergence of a new form of reflexivity. I'll then argue that it was this new form of reflexivity or reflective self-consciousness that led the first philosophers and scientists to argue that the seeds of consciousness, cognition, and even value were inherent in the originative principle or φύσις as ἀρχή from which the present order of things emerged. In sum, they argued for, or at least assumed, a form of what Nagel calls "natural teleology." At the end of this paper, I'll also touch on some of the primary factors that acted as a catalyst behind the new way of thinking and the emergence of the reflective self.

Greek Discovery of φύσις and ἱστορία

There is considerable consensus that the Greek discovery (or invention) of nature, φύσις, is a defining characteristic of Greek philosophy and science,[8] that is, "the discovery that the whole of the surrounding world of which our senses give us any knowledge is natural, not partly natural and partly supernatural" (Cornford 1932, 8). Vlastos captures, or seems to capture, the spirit of the new age in the following statement:

> Regardless of many disagreements among themselves, the *physiologoi* are united in the assumption that the order that makes our world a cosmos is natural, that is to say, it is immanent in nature; all of them would account for this order by the natures of the components of the universe without appeal to anything else, hence, without appeal to a transcendent ordering intelligence. (1975, 24)

Now this statement could give the impression that the *physiologoi* were reductive materialists although this isn't the spirit behind Vlastos' assertion. As he notes elsewhere, the word θέος or god/divine is often employed to qualify φύσις, and the word θέος is found more often than the word φύσις in the Diels-Krantz index to *Die Fragmente der Vorsokratiker* (Vlastos 1993, 1; and see Naddaf 2019).

The fundamental and etymological meaning of the word φύσις is that of "growth," and as an action noun ending in *–sis* it includes three things: the origin, the process, and the result—that is, the whole process of the growth of a thing from its birth to its maturity. In other words, when it is a question of inquiring into the φύσις (nature) of a thing, one must consider the whole process from beginning to end. Now in their respective works Περὶ φύσεως or *On Nature*, the early natural philosophers or *physiologoi* were not seeking the *physis* of a particular thing, but the φύσις of all things (τῶν πάνων, τοῦ ὅλου) from beginning to end. They were thus interested in a *history* of the universe; in an explanation of its origin (φύσις as absolute ἀρχή), of the stages of its evolution (φύσις as process of growth), and finally of its present condition, the *kosmos* as we know and/or see it (φύσις as the result), which included, of course, self-conscious human beings as well as other living things. In sum, they were looking for a theory of everything. In conjunction, the word ἱστορία often accompanies the expression Περὶ φύσεως. The term ἱστορία (*historia*) denotes both a self-conscious intellectual activity and the learning via "investigation" of many interrelated things in view of becoming *sophos* or wise, whence the famous expression ἱστορία περὶ φύσεως to characterize their investigations. Ἱστορία (ἱστορίη in its original Ionian) is an action noun derived from the root **wid*, meaning "see," which also provides the verb οἶδα, "I know"—whence the correlation between *knowing* and *seeing*. Σύνοιδα, that is, "to know from experience" or "self-consciousness," is also derived from the same root and verb. Ἱστορία, meanwhile, is also associated with the verb ἱστορέω, "inquire into," "examine," "investigate." This explains why ἱστορία is often translated as "inquiry," "investigation," and, of course, "history."[9]

The Homeric Oral Mindset and the Pre-reflective Self

Since the word ψυχή or soul is so interconnected with φύσις, and with reflective self-consciousness, I'd like to reintroduce the term into the discussion, and the best place to begin is with the Homeric notion.

In Homer, the average citizen/person is not autonomous (αὐτοκρατής), and reflexivized cognitive acts, and reflexivizations such as "know thyself," are *entirely* absent (Jeremiah 2012, 52, 70). Moreover, the body *always* has precedence over the soul. The body *is* the person or, more precisely, the bodily part that is designated as such. Indeed, in Homer there are various words for organs of thought or emotion (notably θυμός, φρένες, καρδίη, νόος) that are also connected with parts of the body and located, for the most part, in the chest. The inner self is imagined in terms of bodily parts. There simply is no word for inner self or comprehensive consciousness that corresponds to our soul or mind, but rather a kind of psycho-physical fusion made up of psychic organs. It's what some anthropologists call the "dividual" self.[10] After Homer, these bodily parts will slowly fall out of use or be subordinated to parts of the ψυχή.

In Homer himself, the word ψυχή signifies "life"; it is the life force or power by which we breathe. It is the "breathe-soul" because ψύχειν means "to breathe, to blow." It gives life to all bodies. Only when the ψυχή leaves the body does

the body die. The living soul has no cognitive attributes, and so the ψυχή itself is not conscious or endowed with subjectivity. The ψυχή, meanwhile, is also what persists *after* death without any *consciousness* in the house of Hades (Hom. *Od*. XI.220–224). In this case, the ψυχή is often characterized as the "ghost soul" as opposed to the "breathe-soul" when it is living. Ψυχή will in time stand for the psychic unity of the person, that is, the person *qua* self-conscious psychological subject. This will emerge when both the reflexive and ψυχή refer to the new concept of the person, and it will occur with astonishing speed**.**

Before giving examples of the new reflexive self, it should also be noted that in Homer there is a confusion of the literal and the figurative, that is, they are not *consciously* distinguished. Take the pertinent example of inspiration. Homer frequently speaks of a god or goddess "breathing μένος" that is, might, spirit, or battle-rage, into a hero as air into the lungs prior to an important endeavor (e.g., μένεα πνείοντες*, Il*. II.536; III.8; X.482; XI.508). A deep breath of air endows the hero not only with might but with a type of madness. In sum, the hero with μένος breathes it in, and the god or goddess who gives it "inspires" or "breathes" it into him and places it in his chest (θυμός) or lungs (φρένες).[11]

The language is no less clear when Homer and Hesiod refer to the ἀοιδός or poet-singer. The bards have a privileged relation with the Muses and/or gods (Hom. *Od.* VIII.45, 63; Hes. *Theog.* 94–95). Hesiod states that the Muses breathed a divine voice into him in order to celebrate past, present, and future events (*Theog.* 31–32; 38). Neither Homer nor Hesiod are contemporaries of the events of which they sing, but as bards under the inspiration of the Muses who know all things (ἴστέ τε πάντα), they have access to divine truths (Hom. *Il*. II.485; *Od.* XII.191; Hes. *Theog.* 27–28). Via the Muses, they enjoy access to Zeus, who knows all.

Reflexivity and the Emergence of the Conscious Reflective Self

Shortly after the birth of philosophy, we find Xenophanes and Heraclitus claiming that Homer and Hesiod, the traditional iconic poets and educators, have no claim to truthful knowledge. Around the same time, we find the beginning of allegoresis, that is, allegory as an interpretative mode, and the *conscious* distinction between the literal and the figurative (see Naddaf 2009).

During the lifetime of Thales (ca. 624–546), the traditional founder of the Milesian school of philosophy and science, the reflexive is already used to connect νοῦς/νόος or mind with one's conscious, reflective self, although it is also used without the reflexive to designate the same self-conscious reflective self. We find examples of the former in the lyric poets of the seventh and sixth centuries:

- Alcaeus of Mytilene (ca. 626–560): "He lifts up *his own* mind (νόον δὲ <u>ϝαύτω</u>) completely" (Alcaeus fr. 378 LP);
- Mimnermus of Colophon (ca. 660–600): "Make up *your own* mind…" (τὴν <u>σαυτοῦ</u> φρένα) (Mimnermus fr. 7 West);

- Theogonis of Megara (620–550): "A man has nothing better in *himself* (αὐτὸς ἐν αὐτῷ) than innate intelligence (γνώμη) …") (Thgn. fr. 895–896 West).

Examples of the latter are found in Thales' older contemporary, Solon of Athens (ca. 640–560), who commonly uses νοῦς without the reflexive to designate the same conscious, reflective self. It is not the gods, Solon notes, who are responsible for unrest in a society, but the unrighteous minds (ἄδικος νόος) of its leaders (fr. 4.7 Bergk). Deceitful citizens are said to have a porous νόος (fr. 10), while "excess," Solon writes, "is due to an unsound mind (μὴ νόος ἄρτιος)" (fr. 6). These examples also attest to a notion of moral responsibility developing with an accent on autonomous selves.

We also find the use of the verb σύνοιδα, the etymology of which is connected with ἱστορία (see above), with and without the reflexive in the sense of consciousness, that is, an act of introspection as the *OED* defines it: "the action (or ability) of looking into one's own mind; or examination or observation of one's own thoughts, feelings, or mental state." The verb σύνοιδα expresses a knowledge of facts, as in knowing something about a person. We find σύνοιδα with the reflexive in Sappho (ca. 630–550): "I know this within *myself* / am conscious of this (ἔμ᾽ αὔτᾳ τοῦτ᾽ ἔγων σύνοιδα)" (Sappho fr. 16.11–122 LP). Solon, for his part, uses σύνοιδα without the reflexive: "Justice is silently conscious (σιγῶσα σύνοιδε) [for mortals] of present and past occurrences" (4.15). The context also expresses a knowledge of facts. Solon is outraged at the manner in which the Athenian nobles abuse their power for their own self-interest; only those with an unrighteous mind or soul (νόος) would perform such wicked deeds. They are responsible for their own actions, and not the gods.

The relation between consciousness and the autonomous self as expressed in the verb σύνοιδα and complex reflexives culminates, so to speak, shortly thereafter with the advent of self-conscious guilt as expressed by the philosopher Democritus of Abdera (460–370):

> The cheerful man (ὁ εὔθυμος) is compelled to just and lawful acts, and so to rejoice both in waking life and in sleep, and is strong and without worry. But whoever takes no account of justice and doesn't do what's right, all such things cause him displeasure when he remembers them, and he fears and torments *himself* (ἑωυτόν).
>
> (DK68 B174)

The orator Isocrates (436–338) expresses the conscious autonomous self in an even more uncompromising way: "Never expect that your commission of any shameful act will pass without notice. For even if you escape the notice of others, you will be conscious of it with *yourself* (σεαυτῷ συνειδήσεις)" (Isoc. *Speech to Demonicus* 1.16). There's no room for the gods or any other-directed constraints! These examples reflect a *polis* in which the rule of law is the order of the day. Of course, this was now around for several generations (see below), but never expressed in such a forceful way.[12]

It is perhaps not surprising that that the notion of self-knowledge also emerges around the same time. Solon of Athens is often cited as the originator of the Delphi maxim "know thyself." The word ψυχή or soul will, if it hasn't already, become the word of choice to designate the new notion of the self. A generation later with Heraclitus of Ephesus (ca. 540–480) we find the first literary references to self-knowledge (DK22 B101, 112, 113, 116) and the ψυχή as the "true self" (DK22 B118, 77). Heraclitus actually uses the complex reflective in context: ἐδιζησάμην ἐμεωυτόν, "I searched for *myself*" (DK22 B101).[13] Ψυχή/*self* and νοῦς/*mind* (and λόγος/reason) are inseparable.

Physiologoi: The New Self and the First Secular Theories of Everything

I'd now like to turn to how this new notion of the self was behind what is arguably the greatest human achievement till then: the first secular theories of everything in the form of investigations into the nature of things or περὶ φύσεως ἱστορία and the principle on which science or at least Western science was to be founded, that we should never be bound to uncritical acceptance of a particular explanation. The latter observation is reflected, as noted above, in the plethora of new and competing ontologies about nature, or φύσις, characterized by thinking for oneself, engaging critically with one's peers.

We find this new way of thinking exhibited in the author of the first known philosophical prose treatise *On Nature* or Περὶ φύσεως, Anaximander of Miletus (ca. 610–547). In what follows, I'll focus first and foremost on Anaximander as it concerns Nagel's thesis, but also to highlight the extraordinary change in thinking that occurred with the advent of the new reflective self that is so often ignored by specialists in other fields where this phenomenon should be highly relevant.

I'd like to begin with the correlation between φύσις (nature), θέος (god), ψυχή (soul), and νοῦς/λόγος (mind/reason) in the first *physiologoi* or natural philosophers and their connection with natural teleology.

Anaximander chose the word ἄπειρον to designate his originative first principle or φύσις as ἀρχή. The term has led to the spilling of considerable ink. It suggests an enormous mass that is both spatially and qualitatively indefinite, and, following my own analysis (Naddaf 2005, 65–70), he picked the word because it was the best he could find to account for the physical phenomena that were too complex to reduce to a precise element.

The key description of Anaximander's originative principle, as it concerns natural teleology in the current context, is found in Aristotle's *Physics*. According to Aristotle, Anaximander thought of the *apeiron* not only as immortal and indestructible (ἀθάνατον καὶ ἀνώλεθρον) or again as uncreated (ἀγνένητον) and imperishable (ἄφθαρτον), which an ἀρχή is by definition, but as surrounding and governing all things (περιέχεν ἅπαναν καὶ πάντα κυρβερνᾶν), and thus identified it, as the other early *phusiologoi* did, with the divine (τὸ θεῖον) (Arist. *Ph.* 203b6–15; see Naddaf 2005, 66ff). Now, Anaximander may have identified the ἄπειρον as divine simply because like a divinity (or as a divinity is understood), it is immortal

and indestructible. But in light of what we saw above, and the notion that the ἄπειρον governs all things, there is every indication that his originative principle is not only alive but is also endowed with consciousness and cognition. His older contemporary, Thales, who claimed that water (ὕδωρ) was the originative principle of all things (Arist. *Metaph.* 983b18–27 = DK11 A12), also asserted that it was mixed with soul (ψυχή) and was, thus, literally alive (Arist. *De an.* 405a19; 411a7–8 = DK11 A22; Diog. Laert. I.24 = DK11 A21).[14] As with Anaximander, Aristotle suggests that Thales also thought of his originative principle as divine and as controlling all things. Their younger contemporary, Anaximenes of Miletus (ca. 585–528), who claimed that air (ἀήρ) was the originative principle, also established for the first time an *explicit* analogy between the microcosm and macrocosm, that is, between a human being and the universe: "Just as our soul (ψυχή) being air (ἀὴρ) holds us together and governs us, so breath and air enclose the whole world (ὅλον τὸν κόσμον)" (DK13 B2). What's important here is that Anaximenes not only contends that the originative stuff is self-moving and that humans are miniature replicas of the cosmos, but that they are both endowed with a controlling element and thus on my reading consciousness and cognition.

A century or so later, Diogenes of Apollonia, who most certainly read Anaximenes' book and clearly became his follower, writes:

> That which has intelligence (νόησις) is called air (ἀὴρ) by men, and all men are steered (κυβερνᾶσθαι) by this and it has the power (κρατεῖν) over all things. This seems to be God (θέος) to me and to have permeated everywhere, to arrange (διατιθέναι) all things and to be in all things.
>
> (DK64 B5)

Air for Diogenes (DK64 B4) is the source of both soul (ψυχή) and intelligence (νόησις). In reality, with the exception of Democritus of Abdera, all the early natural philosophers postulated an originative "material" principle endowed with consciousness and cognition. But even in the case of Democritus the seeds are already there (see Naddaf 2005, 157–159). In fact, as Socrates makes abundantly clear in his autobiographical story in Plato's *Phaedo* where he gives an overview and critique of the natural science or ἱστορία περὶ φύσεως accounts in vogue when he was young (*Phd.* 96a–99d), all, without exception, saw soul and thought as physical, and as *inherent* in the originative substances. The upshot is that the essence of life and cognition, contrary to the claim of reductive materialism, *was thus coeval* with the birth of the universe.[15]

But how did the κόσμος emerge for Anaximander? The κόσμος grows from the ἄπειρον like a plant from a seed (DK12 A10). The seed contains all the opposites: hot and cold and wet and dry. The cause of all natural change for Anaximander is the reciprocal action of the mutually hostile opposites. At the end of the cosmogonical process, we find the earth resting at the center of the universe—at the point of equilibrium an equal distance from all the points on the celestial circumference (DK12 A26). The earth's position is the most remarkable element in this cosmological representation because it liberated the mind from imagining

that the earth needs a material support, which was the norm in *all* cultures before then (Naddaf forthcoming). Moreover, the position of the earth at the center of the universe explains that the celestial bodies make complete circles around it. In addition, Anaximander's contention that the sun, moon, and fixed stars were on separate rings or orbits suggests that he was the first to discover what we now call space. He gave purely "natural" explanations for meteorological phenomena. Thunder and lightning are brilliantly explained as the fine and light winds breaking out of the heavy dark clouds and causing a flash of light and tearing sound (DK12 A11, A23). The latter shows to what degree the traditional gods are eliminated from the cosmic picture. Indeed, without the gods as external causes, nature (φύσις) is a self-maker (αὐτοποίησις) or self-grown (αὐτοφυής) and thus, like a reflective self or being, it directs the action towards itself.[16] Anaximander's naturalistic picture became the norm among the intellectual class.

The only extant fragment from Anaximander explains how the present order of things is maintained:

> Things [natural things] perish into those things from which they derive their being [i.e., the opposites], according to necessity (κατὰ τὸ χρεών); for these things [the primary opposites] pay penalty and retribution to one another for their injustice according to the assessment of time.
>
> (DK12 A9; B1; my interpolations)

In sum, the natural order of things is based on an equilibrium of rights and obligations, as we see exemplified in night and day, that is, an equilibrium which results when the constituent powers or primary opposites act as equals. These are the same powers or opposites that were behind the initial formation of the universe.

So, the notion of the divine that was inherent in the primordial substance and said to encompass and steer all things is now replaced with natural law. How can this apparent contradiction be reconciled? As Nagel himself argues in his notion of "natural teleology," there is no inconsistency in claiming that there are laws governing the behavior of elements, and yet other laws, teleological laws, working on a universal level (2012, 66ff). For Anaximander, it is abundantly clear (at least for me) that the natural order of things, and thus the behavior of elements, functions according to strict natural law: the constant interchange between the primary powers or opposites as we saw above. But this doesn't exclude that the seeds of consciousness, cognition, and value that were inherent in the originative principle didn't emerge with life on earth, which brings us to the origin of living things and, in particular, humans.

Anaximander was also the first to give a natural explanation of the origin of living things (see Naddaf 2005, 88–92). The explanation is entirely consistent with his cosmological system. Living beings emerge from a sort of primeval moisture which is activated by the heat of the sun after the initial formation of the universe (DK12 A27). He also argued that the human species must have been born from living things (or creatures) of another species because humans are the only animals

in need of prolonged nursing after birth; otherwise, they would not have survived (DK12 A11). But how did he account for human consciousness, cognition, and value? It is here that we must return to the originative principle. Anaximander was well aware that human society was not coeval with the appearance of humans, as we find in mythical accounts, but that forms of human sociality evolved over time. Theories of human progress had already begun as we find espoused in his younger contemporary, Xenophanes of Colophon (e.g., DK21 B18). Indeed, there is an interest in fossils and the correlation with the age of the earth and humanity (DK21 A33; see Naddaf 2005, 92–112). The accumulated evidence suggests that Anaximander understood that humans had evolved physically and cognitively over a long period of time, and that he initiated or was part of a new intellectual phenomenon, a new way of seeing and understanding the world as intimated in the term ἱστορία and the self-conscious reflexivity it presupposes. But the natural corollary of this was that the originative principle must have contained the potential seeds that resulted in the present world order that also included humans. It was indeed a *natural* order, so the seeds of consciousness, cognition, and even value must have been inherent in the original principle. There is thus no intentional providential order, but the nature of things evolved as it did according to natural laws of which humans are a part. Humans, as Solon notes from the same time, are responsible for their own destiny. They must use their νοῦς or λόγος effectively to make human society a better place in which to live. Anaximander's fragment is indicative of this new thought: live in conformity with nature.

There is no room for atheism, although the seeds are there, but neither is there a notion of intentionality or providence as we find in theism. Anaximander thus represents what I call one of the first secular theories of everything. Anaxagoras of Clazomenae (ca. 500–428), a century later, is a product of this same movement, and although accused by some of atheism, his famous fragment captures well the spirit of the new age:

> Blessed is he who has devoted his life to scientific research (τῆς ἱστορίας): he will neither malign nor harm his fellow citizen, but observing the ageless order of immortal nature, will inquire from what source it was composed and in what way. Such men would never take part in shameful deeds.
>
> (fr. 910 *TGF*)

This is the same Anaxagoras who provides one of the first extraordinary examples of "scientific" knowledge based on correct interpretation of empirical evidence, to wit: solar eclipses occur when the moon blocks the sun's light (*antiphraxis*) (Graham 2013, 109–136).[17] In sum, Anaxagoras could empirically test his hypothesis, which explains why it was subsequently accepted by his peers (see Naddaf forthcoming).

I note this to reiterate the extraordinary achievements that occur shortly after the emergence of the reflective self in ancient Greece and why it had no paradigms in other civilizations and societies before then. But what were the necessary factors behind the reflective self and the intellectual and scientific revolution it

fostered? There is no one particular factor behind the "original" enlightenment, but some appear more indispensable than others, notably the alphabetic script and the advent of the polis, both of which are exclusively Greek. I'll limit myself to these two as they appear to be the most evident to me.[18]

Unique Factors Behind the Intellectual Revolution

Writing, or, more precisely, the alphabetic writing system, is understood as one necessary factor behind the ἱστορία phenomenon. The Greeks borrowed the Phoenician consonantal alphabet, and some genius adapted it to the Greek language by adding the five vowels that were accorded equal status with the consonants. Eric Havelock has argued that by simply adding vowels to the consonant symbols, the Greeks discharged a surge of psychic energy which radically and permanently transformed human consciousness (1982, 82). This is quite a contention, and I have no time to address it here. What is certain is that shortly after the introduction of the alphabet (ca. 750): the poet-soldier Archilochus of Paros (ca. 680–640) expresses his personal thoughts in writing; reflexivity in the Greek language and thought emerges for the first time; the codification of secular law begins (ca. 675); the iconic poems of Homer and Hesiod are recorded (ca. 650–600); and the first critical and secular prose treaties appear upon the scene (ca. 575).

Writing enables comparing and questioning, which can lead to skepticism and alternative explanations of what can be known (Goody and Watt 1963). The examples of this in sixth-century Greece are numerous. But this raises the question, why didn't this happen in other literate societies? Some would argue that the Greek writing system, the paradigm of our own writing system, was much easier to learn. To some degree, this is true, but unlike other civilizations, the Greeks were not dominated by a religious scribal class at the service of a monarch (or his powerful priestly cohort) who was understood as god incarnate or, at the least, as god's representative on earth. Greek religion, on the other hand, was a kind of religion without priests; that is, there was no caste of priests with affixed tradition, education, initiation, and hierarchy as we find in most other civilizations. And even in cults that were well established in Greek city-states, there was no class of priests, but anyone who followed the usage of the community could become the priest of the cult. As Walter Burkert notes: "In Greece the priesthood is not a way of life, but a part-time and honorary office" (1985, 97).

But writing alone cannot entirely explain the advent of "critical" thinking in ancient Greece. It has been argued that another necessary condition to account for Greek rationality, the peculiar rationality we associate with ἱστορία, was the πόλις or city-state. What was unique about the polis was a central square or public space called the ἀγορά. Although it appears for the first time in the Greek colonies, its essence originated with the old warrior assembly, in which each man could speak freely on condition that he enter the circle and place himself ἐς μέσον, that is, at its center (e.g., Homer *Il.* XVIII.502–505; 19.173; *Od*. II.10–11). After a series of economic and social transformations (see Naddaf 2002), this assembly of equals became the *agora* of the city, where all the citizens (although initially only the

aristocracy) could debate and discuss the affairs of the community. The agora is thus the circular, centered space that permitted all citizens to affirm themselves as ἴσοι (equals) and ὅμοιοι (peers), and to enter with one another into a relation of identity, symmetry, and reciprocity—in sum, to form together a united cosmos. Without generalizing too much, the agora is the symbol of a spatial structure radically different from the one which characterizes the oriental monarchies and the Mycenaean or bronze age Greek world. Power (κράτος, ἀρχή, and δυναστεία) is no longer situated at the top of a ladder. Power is disposed ἐς μέσον, in the center, in the middle of the human group (see Naddaf 2005, 82–86). This, of course, fostered the notion that one could openly debate almost any issue without fear of punishment by god or man. What counted were persuasive arguments based on reason and observation as reflected in the word ἱστορία (see above). The political experience offered both new models for cosmology (thus the cosmos could now be seen in terms of a balanced relationship or contract between its equal, but opposite, forces or elements as noted above in the case of Anaximander) and the possibility of challenging deeply held assumptions about "nature," whence the invention of the word φύσις to capture this new discovery.

Closing Remarks

The controversy on the origins of Greek philosophy and science (or what I'll simply call here the Greek enlightenment) has been going on for generations. Some have characterized it as a miracle of sorts because their new way of understanding the world is so radically different from anything till then, which I endeavored to capture in the case of the Milesians, the first philosophers, and some references to their immediate successors. There is no doubt that Greek culture borrowed considerably, consciously or unconsciously, from the surrounding cultures. Indeed, it is unlikely that the Greeks would have invented the alphabetic script when they did, if ever, without borrowing the consonantal script from the Phoenicians. And by making the claims that I do, I in no way wish to depreciate the contributions and genius of other civilizations. But I want to insist here that what occurred in ancient Greece among a certain elite is without parallel. Without the alphabetic script and the polis culture would reflexivity in Greek language and thought that culminated in a more open and critical way of understanding the world which we associate with Western philosophy and science as documented above have occurred? As noted above, there is a wide consensus on the influence of culture on biology, and there is every indication, as Hawkes notes, that it is speeding up. I therefore submit that the cultural influences of, most notably, the alphabetic script and the polis may have given rise to a genetic mutation which, in turn, was the catalyst behind the new reflexive self which under the same cultural influences led to the ἱστορία phenomenon, the emergence of *Homo philosophicus*, and the notion that we should never be bound to uncritical acceptance of a particular explanation which is at the foundation of Western philosophy and science.

It changed the course of civilization in the West to the extent that the world may have unfolded very differently from how we now find it. Indeed, we could still be living in civilizations that are versions of those that existed before then. That's one of the bold claims I'm making here, and one that is rarely ever considered among those working on the origin and development of consciousness in biology, anthropology, neuroscience, and related fields.

That being said, I don't wish to imply that the Greeks or those who were behind the revolution or enlightenment were "genetically" superior to others, but the revolution in thinking that I argue is related to a new kind of reflective self, started there and then took off. People in other surrounding but non-Greek cultures when exposed to the new way of thinking under similar social conditions and/or residing in Greek society and being exposed to the new way of thinking, that is, with the same opportunities and education, could contribute as well.[19]

Notes

1 A more relevant example may be the mutation in the gene active in red blood cells that allows people in the high altitude of Tibet to survive (Reich 2018, 65).
2 Plato unsurprisingly connects ψυχή with life (for the etymology, see below). As he notes further on, when an object moves itself, we say it is alive (ζῆν) and if it is alive, we say it has soul (*Leg.* 895c).
3 Plato considered as axiomatic that the celestial bodies move in circles because rotary motion is the one most appropriate for reason and intelligence (Pl. *Ti.* 34a).
4 Nagel is aware of the Aristotelean precedent of this kind of natural teleology even though there is no cosmogony in Aristotle (2012, 66), but makes no reference to the Presocratics.
5 I tease out in more detail the natural teleological points in Naddaf 2019.
6 The neuroscientist Antonio Damasio is a pertinent example (2012, 4). He claims that consciousness predates humans, and then provides an analysis of the different kinds of selves that evolved in the following order: protoself, core self, autobiographical self. I don't include here theists who believe in the inerrancy of "sacred" texts.
7 It has been argued that the notion of the *ātman* as the inner self or reflexive self emerged around the same time in ancient India (see Seaford 2016). Be that as it may, the *ātman* or Indian notion of the reflexive self didn't culminate in the kind of philosophy and science as we find in ancient Greece beginning in the sixth century. Indeed, the *Upanishads* are sacred literature, and dominated by what I would characterize as the supernatural. And the society in which it is prominent is deeply hierarchical. From this perspective, one could say that not all self-reflective selves are equal.
8 Other defining characteristics are, of course, conscious methodologies and rigorous proofs, including the axiomatic-deductive demonstration.
9 For a more detailed analysis, see Naddaf 2012.
10 For an interesting overview which considers both the anthropological and the philosophical in the context of the difference between the dividual and the individual, see Smith 2012.
11 This would bode well with Snell's (1953) highly influential, but controversial, thesis that Homeric man has no sense of the self (or the whole personality) and is thus incapable of making decisions. External forces, in particular, the gods, are behind all choices, and thus for Snell, the Homeric hero never sees himself as responsible for his action.

12 For the translations relative to the notion of consciousness in the early poetic tradition, I'm following Jeremiah but sometimes with minor revisions.
13 We also find the first references in Heraclitus to the unexamined life (DK22 B123) and care of the self (DK22 B123).
14 This is the case because ψυχή, for Thales, is a self-moving force (κινητικόν τι, Arist. *De an.* 405a19) that pervades (μεμεῖχθαι, 411a7) the universe (ἐν τῷ ὅλῳ, 411a7). I'm taking the liberty of using the expression "self-moving" because the assumption is that ψυχή is inherent in the primordial principle, water. But I don't want to make the stronger claim that they are ontologically separable for Thales.
15 I provide a more detailed analysis of the early Greek philosophers in the current context in Naddaf 2019.
16 I borrow this from Aristophanes' *Clouds* (ca. 427), which has a perfect example of the new mindset. Socrates tries to disabuse Strepsiades of his rustic anthropomorphic conception of the divinity by offering a naturalistic explanation. It is for all intents and purposes Anaximander's. Aristophanes uses the complex reflexive as an emphatic locution to characterize the phenomena: "lightning ignites itself (αὐτὸς ἑαυτόν) due to its rush and force of its movement" (*Nub.* 404–407). For more on this, see Naddaf 2019.
17 Graham sees Anaxagoras "as the Einstein of his age" (2013, 4). I consider his predecessor, Anaximander, as the wonderchild for reasons I summarize above. I provide a detailed review of Graham's enlightening book in *Mind* (Naddaf 2016).
18 Seaford (2004) makes an insightful and original argument for the role of money in the birth of philosophy and science in ancient Greece. He argues that early Greek philosophy arrives at the idea of the world as a single substance underlying the plurality of things by projecting *unconsciously* the substance of monetary value onto the cosmos—although strictly speaking he never explains how the mechanism functions. This is not the time to engage with this intriguing thesis. I discuss other factors in context, including Robert Hahn's insightful thesis that it was first and foremost architecture in Naddaf 2002.
19 I tease this out in more detail with pertinent examples in ongoing research.

Bibliography

Boyd, Robert, Peter J. Richardson, and Joseph Henrich. 2011. "The Cultural Niche: Why Social Learning is Essential for Human Adaption." *Proceedings of the National Academy of Sciences* 108, no. 26: 10918–25.

Burkert, Walter. 1985. *Greek Religion*. Translated by John Raffan. Cambridge: Harvard University Press.

Cornford, F. M. 1932. *Before and After Socrates*. Cambridge: Cambridge University Press.

Damasio, Antonio. 2012. *Self Comes to Mind*. New York: Vintage Books.

Goody, Jack and Ian Watt. 1963. "The Consequences of Literacy." *Comparative Studies in Society and History* 5: 304–45.

Graham, Daniel. 2013. *Science Before Socrates: Parmenides, Anaxagoras, and the New Astronomy*. Oxford: Oxford University Press.

Havelock, Eric. 1982. *Literate Revolution in Greece and its Cultural Consequences*. Princeton: Princeton University Press.

Hawkes, John, Eric T. Wang, Gregory M. Cochran, and Robert K. Moyzis. 2008. "Recent Acceleration in Human Adaptive Evolution." *Proceedings of the National Academy of Sciences* 104, no. 52: 20753–58.

Heller, Agnes. 2003. "Five Approaches to the Phenomenon of Shame." *Social Research* 70, no. 4: 1015–30.

Jeremiah, Edward T. 2012. *The Emergence of Reflexivity in Greek Language and Thought*. Leiden: Brill.

Laland, K. N., J. Odling-Smee, and S. Myles. 2010. "How Culture Shaped the Human Genome: Bringing Genetics and the Human Sciences Together." *Nature Reviews Genetics* 11, no. 2: 137–48.

Lobel, E. and Page, D., eds. 1955. *Poetarum Lesbiorum fragmenta*. Oxford: Oxford University Press.

Naddaf, Gerard. 2002. "Robert Hahn and the Origins of Greek Philosophy." *Ancient Philosophy* 22, no. 1: 153–70.

———. 2005. *The Greek Concept of Nature*. Albany: SUNY Press.

———. 2009. "Allegory and the Origins of Philosophy." In *Logos and Mythos: Philosophical Essays on Greek Literature*, edited by William Wians, 99–131. Albany: SUNY Press.

———. 2012. "L' ἱστορία comme genre littéraire dans la pensée grecque archaïque." In *Lire les présocratiques*, edited by Luc Brisson, Arnaud Macé, and Anne-Laure Therme, 61–78. Paris: Presses Universitaires de France.

———. 2016. "Review of *Science Before Socrates. Parmenides*, Anaxagoras*, and the New Astronomy*, by Danial Graham." *Mind* 125, no. 499: 942–52.

———. 2019. "Revisiting the Religion of the Early Greek Philosophers, and Socrates' Contribution to the Controversy." *Ápeiron*: *Estudios de filosofía*, *monográfico «Presocráticos»* 11: 65–97.

———. forthcoming. "Cosmological Models and the *Peri Phuseos* Tradition." In *The Edinburgh Critical History of Western Philosophy, vol 1: Greek and Roman Philosophy*, edited by Giuseppe Cambiana and Alexandra Lianeri, 1–50. Edinburgh: Edinburgh University Press. The penultimate version of this essay is available on academic.edu.

Nagel, Thomas. 2012. *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False*. Oxford: Oxford University Press.

Reich, David. 2018. *Who We Are and How We Got Here: Ancient DNA and the New Science of the Human Past*. New York: Pantheon Books.

Seaford, Richard. 2004. *Money and the Early Greek Mind*. Cambridge: Cambridge University Press.

———. 2016. "The Interiorisation of Ritual in India and Greece." In *Universe and Inner Self in Early Indian and Early Greek Thought*, edited by Richard Seaford, 204–19. Edinburgh: University of Edinburgh Press.

Smith, Karl. 2012. "From Dividual and Individual Selves to Porous Subjects." *The Australian Journal of Anthropology* 22: 50–64.

Snell, Bruno. 1953. *The Discovery of Mind*. Translated by T. G. Rosenmeyer. Oxford: Oxford University Press.

Sedley, David. 2013. "An Atheist Underground." In *Politeia in Greek and Roman Philosophy*, edited by Verity Harte and Melissa Lane, 329–48. Cambridge: Cambridge University Press.

West, M., ed. 1972. *Iambi et Elegi Graeci*. Oxford: Oxford University Press.

Wilson, E. O. 2017. *The Origin of Creativity*. New York: Liveright.

Vlastos, Gregory. 1975. *Plato's Universe*. Seattle: University of Washington Press.

———. 1993. "Theology and Philosophy in Early Greek Thought." In *Studies in Greek Philosophy (Vol 1), The Presocratics*, 92–129. Princeton: Princeton University Press. Originally published 1952.

2 Archaic Images of Totality

D. M. Spitzer

Introduction*

"Philosophy," Anthony Preus once wrote, "is the common heritage of human beings as rational entities" (1992, 14). Oriented in part by the ample, open, and inclusive vision of philosophy encouraged by Professor Preus, this paper seeks to increase attention to a broader context for archaic Greek philosophies through cataloging and exploring some images of totality from various ancient sources. Widening the scope will encompass much early image creation, often as (in the form of) poetry, from Mesopotamia, Persia, India, and Egypt, as studies such as those carried out by Preus (1992, 1997b), West (1971), Burkert (2008/2009), Couprie, Hahn, and Naddaf's *Anaximander in Context* (2003), and Marciano's contribution to the volume edited by Perilli and Taormina (2018), have done in different ways and to varying degrees. At least in terms of curriculum organization, Preus has suggested that ancient Greek philosophy is more aptly considered "a cultural product of the eastern Mediterranean" and so better classified as "non-Western" and taught (and studied) within a context that includes cultures of North Africa, the eastern Aegean, Mesopotamia, Persia, and India (1992, 14–15; see also Carelli 2016).

In honor of Professor Preus' engagements with Greek philosophy and his activities to promote research in that field, the present study focuses on various images of totality from the multicultural field within which early Greek thinking emerged. Historically, this field is the Greek archaic period, approximately ninth through the early-fifth centuries,† though one image considered below, that of Diotima (mid-fifth century), developed slightly later, while others reach back into earlier millennia. Because the images of the historically earlier sources are sustained through traditions of orality and writing, in the cases considered below they are assumed to constitute a broad, diverse, and active framework of cultural imaginaries: for Greeks, the oral tradition from which the Homeric poems are formed would move slightly earlier into perhaps the final centuries of the second

* For Tony Preus, your inspiration, encouragement, and guidance on my second sailing.

† All dates are BCE unless otherwise indicated.

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millennium, while the *Zarathustran* oral tradition extends somewhat further into (perhaps) the mid-sixteenth century (Skjaervo 2011, 2), the *Upanishadic* tradition develops around the seventh century but within a much older (ca. late-second millennium) *Vedic* tradition (Olivelle 1996, xxiv–xxxiii), and the written tradition of Egypt reaches much deeper into the end of the fourth millennium (Silverman 1997b, 230).

Preus has noted not only that a "standard list of early Greek 'philosophers' is to some extent arbitrary," but also that it has been constructed according to prejudice and bias (1997a, 5). In response to these observations, this paper collects and interprets images of totality from a range of sources, including some of those suggested by Professor Preus for an alternative approach to teaching ancient Greek philosophy (1997a, 2, 5), in an attempt to discern some features of archaic thinking in texts less (or in-)visible within the "standard list." Whatever imbalance exists both in the aim—towards insights about *Greek* thinking—and in the attention to the sources reflects my own limitations of skill and knowledge rather than an inclination to work on and from the supposition of static cultural boundaries and interaction and exchange across such boundaries. Boundaries exist, but in dynamic, rather than static conditions depending on time, perspective, and interpretive emphasis, and even so they are also problematized by those very dynamics: on a small scale, in a figure like Thales, whose ancestry was reportedly Phoinikian and Greek (Diog. Laert. I.1.22.; Spitzer 2021b, 1–2) and whose thinking of ὕδωρ activates a sense of continually shifting and reconfigured boundaries in relations of opacity (Spitzer 2021a); and on a larger scale, in the population, production, and relations of cities and regions where Greek philosophies flourished in the archaic period (see Malkin 2004; Greaves 2002; Preus 1992, 4–5). This study works from a notion of culture as a constellation of moving and changing bodies engaged in "a continuous process of learning guided by curiosity along with practical needs and interests" that develops "especially," as Burkert has phrased it, "through a willingness to learn from what is 'other,' what is strange and foreign" (1992, 129).

Philosophy, in its moments of formation in the Greek regions, seems to be well-endowed with that receptivity to "what is strange and foreign." So, too, does philosophy encompass more than it is allowed when a conventional narrative stresses Greek genius and Thales as beginning a tradition in "the West," not only in terms of the provenance of source but also in terms of the kinds of texts included in the field. "Standard courses in the history of ancient Greek philosophy," Preus observes, "tend to reinforce the opinion that philosophy came into being with Thales of Miletus, and that any precursors of Thales were surely Hellenic, for example Homer, Hesiod, Solon, and so on. The ancient Greeks did not think of things that way" (1997a, 1).[1] The breadth Preus suggests for the disciplinary range of philosophy, which for him includes the multiple and diverse pathways towards thinking and understanding flowering out of "a condition of mind, an attitude, a desire" (1992, 14), welcomes and invites study of the figures below, however marginal to a history of philosophy they may seem to be at present.

Totality

Totality imagines a whole. That whole, however, does not necessarily form a unity; different images of totality are constructed in varying ways. Images of totality are in-built features of cosmogonies, which by definition involve some differentiation and view onto the possibility and development of a manifold. On the other hand, those images of totality that result in a unity, such as the unity of *Taittirīya Upanishad*, nevertheless refer to a differentiated manifold ("all things") that the image of unity reduces or refers to itself.

Imaging a totality constitutes part of archaic philosophic practice. Naddaf elaborates this, adding the further condition that such an image was grounded in "rational argumentation" (2009, 105). In provisionally addressing the boundaries of *mythos* and *logos*, Wians goes further, adding that *logos*—in a sense that differentiates early philosophy from other early literatures—results from "a deliberate inquiry" and is attributable to a named individual (unlike myths), that it is debatable in all its parts, that it is exclusive in its bearings toward other *logoi* positing logically incompatible views, and that it challenges, rather than supports, cultural norms (2019, 11). Yet, as Glenn Most has illustrated, "comprehensiveness" forms an aspect of archaic Greek poetic traditions, particularly epic, that persists in the archaic Greek texts deemed philosophy (1999, 344, 358). That is to say, images of totality run through the generic and disciplinary boundaries that may in any case be retrojections of contemporary categories, anachronistic in an archaic Greek context (Dougherty and Kurke 1998, 2). Furthermore, the possibility of attribution to an individual is culturally specific and does not apply to some of the sources studied below that developed through long periods of oral traditions, with one result that these provisional distinctions of *logos* and *mythos* will be suspended in the following discussions. The early practice predates, or combines, or transcends whatever differences *logos* and *mythos* seem to name. A similar practice operates also in Egyptian scribal education and crosses areas of inquiry (Eyre 1997, 91), and can be heard in the *Upanishads*, where the work of thinking takes place as images, with concepts operating "as personified entities at one moment, only to become abstract ideas again in the next passage" (Cohen 2008, 2). In a Mediterranean and Near Eastern cultural ambience images of totality are both very ancient—the vast kosmos of the *Enuma Elish*, for instance, reaches back into the second millennium (Heidel 1951, 13)—and similarly uncontained by a single form of thinking or writing: myth and abstraction weave through prosaic inscriptions, hieroglyphs and illustrations, poetries, and prose writings. The images of totality from the archaic period (and earlier) unfurl as multimodal, multidimensional compositions.[2]

Because of the sprawl of a totality's contents, its ever-shifting constituents, images come forward as a potent way to gather into speech a totality in one moment, appearance, attitude, or posture of its restless alterations. In this sense, the imaging of totality points to an awareness of epistemic and other limits and then, too, to poetry and imagination. Lesher has developed some connections across two of these (epistemic limits and poetry), illustrating that one archaic Greek

view of mortal knowledge recommends recognition of, and respect for, the limits conditioning human knowledge, while another view develops a conduit—poetry/song and the poet/singer—through which immortal and mortal knowledges pass (2009, 17–22). Totality may exceed human epistemic limits, yet it is available to divinities and, importantly, can be communicated to human beings.

To render an effective image, totality needs to account for generation and change. Genealogy offered a way to bring to life an image of totality by "a dynamic narrative of how things come into being and pass away," spanning and connecting the texts typically identified as poetry or philosophy (Most 1999, 348–349). The continual derivation of beings from sexual reproduction enables a process to be articulated in a familiar manner and to be incorporated within the image so that the task can be reduced to a manageable scale: issuing a roll call of all existing things would provoke the response of Homer when faced with the Catalog of Ships, where the poet declares that the whole feat could not be accomplished without the memory of the Muses, even if the singer had ten tongues, ten mouths, a weariless voice, and a heart of bronze (Hom. *Il.* II.484–93). Similarly, Hesiod defers to local knowledge when it comes to accounting for all the Okeanids because the task is too difficult for a mortal (Hes. *Theog.* 363–370). Bringing forth a dynamic, however, that by its articulated action accounts for the emergence, growth, and decline of beings identifies the energy of a totality without needing to refer to each specific being within it.

Both because of the dynamics of the living manifold and because a view of a whole—as with, for instance, sculpture—remains unavailable to human perception, totality requires an image. Images make a whole intelligible as a totality. Yet, if this is so, totality will not only require images but, because images render a totality intelligible, it will also in some sense *be* an image, related to the imagination, however rational that may be, and inextricable from an image communicating it. If, as Cherubin has argued, "in Xenophanes and Parmenides, the ability to say how what is, is will require an awareness of the whole of what is, *as* whole" (2009, 58), this ability will also require both images and knowledge of the totality *as* image.[3] An insight such as this may underlie and animate Herakleitos' thoughts: "One thing, the only wise thing, is unwilling and willing to be called by the name of Zeus" (DK B32; trans. Robinson 1987, 27), and "comprehension: whole and partial" (DK B10; trans. Hix 2015, 11). Both statements, that is, suggest limitations to knowledge by pointing to the elusive abundance that resists a name or withdraws from cognition's grasp (see Spitzer 2021b, 6–10). The concept of totality recommends attention to the pair of limitation and elusion most of all because of its scale.

Archaic Images of Totality

The images of totality discussed below are grouped thematically, that is, according to the predominant valence and figure of each conceptualization. For instance, the first constellation consists of images that sustain a common reference to the body. Because the images are constellated, they allow for (and even urge) further

and different ways of organizing and considering their various interrelations; different constellations, that is, could bring into view different aspects or features of each image.

Corporal Totality

1. Book of the Dead and Memphite Theology

The original pair to evolve from Atum, Shu, and Tefnut are seemingly masculine and feminine powers of emptiness and separation, what Allen calls "void," that also embody two conditions of air: Shu—dry air; Tefnut—moist air (Allen 1997, 122–123; Forman and Quirke 1996, 8–9).[4] In some Egyptian images of totality, Geb (earth) and Nut (sky), progeny of the original pair, form the region within which life will further develop. An illustration of this adorns the *Book of the Dead of Nesitanebtashru*, a text from the eleventh century (Allen 1997, 122; *Book of the Dead = BD*). In it, what appear to be ram-headed beings attend and support Shu, who separates and supports Nut while Geb lies within the area between Nut's feet and hands. The kosmos is composed of a pair of living bodies yearning for one another—in this the image also belongs to the group of erotic images of totality—and so works as an image of the generative energies active on the level of the whole.

Another image of the kosmos as a body propels a text known as the Shabaka stone (ca. 700), which might preserve a no longer extant text probably composed on leather or papyrus during the thirteenth century (Allen 1997, 124):[5]

> There came into being as the heart and there came into being as the tongue (something) in the form of Atum. The mighty Great One is Ptah …
>
> Indeed, all the divine order really came into being through what the heart thought and the tongue commanded …
>
> And so Ptah was satisfied, after he had made everything, as well as all the divine order.
>
> (Wilson 1958, 1–2)

The beginning imaged in John A. Wilson's translation of "The Memphite Theology of Creation" takes place as the division of Atum into heart, which bears the directive role in a being's thought, action, and feeling (Hornung 1987, 122), and tongue, the organizing power of articulation in speech. The tongue is interpreted as "commanding speech" and as "an approach to the Logos Doctrine," while Atum itself seems to name "Totality" or "undifferentiated" (Wilson 1958, 1 and n. 1). Hornung understands the term as something like *undifferentiated* (*l'indifférencié*) in an unusual sense that compounds non-being and total-being and that has the power to differentiate itself (1987, 116).

In addition to the totality of Atum articulated at the outset, the text points also to a unity in the divine entity Ptah, not only in the phrase "[t]he mighty Great One is Ptah," but also in the way this entity unifies and animates all

things (Ptah "is in every body and in every mouth …"). As the totality of a world unfolds and continues its unfoldings, it does so within the limits (or coextensively) with the unity, Ptah, as if the unity spreads into each body of the expanding totality.

2. Enuma Elish

In the composite epic of creation *Enuma Elish*, the corpse of the primeval Tiamat—understood as "salt, oceanic water" (Furlong 1992, 5), slain and carved by Marduk, becomes a region in which Marduk establishes a kosmos:

> The lord rested, examining her dead body,
> To divide the abortion (and) to create ingenious things (therewith).
> He split her open like a mussel (?) into two (parts);
> Half of her he set in place and formed the sky…
> […]
> And a great structure, its counterpart, he established, (namely,) Esharra.
> (*Enuma Elish* IV.135–138, 144; trans. Heidel 1951, 42–43)

The sky and Esharra, what Heidel terms a "poetic designation of the earth" (1951, 43 n. 96), not only mark out the regions of a kosmos, they also memorialize perpetually both the destruction of a "divine population living under the matriarchal rule of the primordial goddess, Tiamat" (Furlong 1992, 9) and, more fundamentally, the main agent of a primal condition characterized by a generative and unbound fluidity (Tessier 1987, 134).

Unlike the Egyptian image of Geb and Nut, a not only dead but vanquished and mutilated body becomes the basis for cosmogony in the *Enuma Elish.* As Tessier puts it, "the stuff of the universe is not earth but bloody flesh" (1987, 125). Further, a masculine overlord mutilates the feminine body in his world-crafting as part of his campaign to establish an "unchanging continuance of the world as the Babylonians knew it" (Saggs 1989, 293).

3. Diotima

"One may with some certainty conclude," as George has put it, "that the fundamental reason Diotima is not accepted as a real historical person who lived and taught Socrates is due to the fact that she happened to be a woman and men have dominated the study of philosophy" (2007, 3). In part via exposing a long pre-Renaissance history of accepting Diotima as a figure independent of Plato's *Symposium*, Waithe has distinguished Diotima from Plato on both philosophic and historical grounds and has suggested a *floruit* of mid-fifth century (1987a). Though at the outer edge of the epoch under consideration, Diotima appears here as her own philosopher—even as she is indelibly written into (and by) a set of concentric recollections within a text of Plato—in part to add to the work of

restoring her in that role, taking up Preus' recommendation for a more inclusive view of ancient philosophy.

A principle of interpretation and conveyance, *Eros* maintains the totality through a mutual filling—or a complete filling (συμπληροῖ)—of the middle ground (ἐν μέσῳ) separating the mortal and the immortal dimensions of the kosmos. That hermeneutic filling which joins both mortal and immortal and "binds the whole itself to itself" (Pl. *Symp.* 202e.3–7) occurs by and through the active body of Eros. The genealogy following this scene adds bodily aspects to the figure (202b.1–d.8), and though the offspring of two immortals, Eros nevertheless occupies an intermediate condition "neither as immortal nor as mortal" (203d.8–e.1).

As Hawthorne has shown, just as the middle-ground condition and function "point to a concern with mediation and process, both of which can be shown to be important cultural expectations for women," so do the images presented by Diotima arise from "her experience of the body, as a woman" (1994, 85–86; see also her discussion of *metaxu*, 88–89). Metaphors from a female-bodied experience—of pregnancy, birth, becoming, the death-rebirth pair, transformation—provide the images for Diotima's thinking about *Eros* and the totality.

Where Waithe reads an emphasis on self, or a non-altruistic view of the good in Diotima (1987a, 85, 90–91), there may be instead a more fundamental challenge to notions of self(-identity) at work. In engendering another beyond oneself—whether another human body, an artifact, a law, or philosophic orientation—the good acquired for a self for all time (e.g., Pl. *Symp.* 207a.1–2) comes to be in and so *for* another. The "qualities" of a self generated in another become other than the self, and this seems to be the meaning of the everlasting condition available to a (mortal) self. A similar erosion of classical oppositions takes place in Bar On's reading of Hawthorne's interpretation of the body metaphors in Diotima's speech. There, Bar On finds that the metaphors aid in the work to articulate a non-dualistic epistemology that does not depend on "objectifying and alienating what knowledge is about from the knower" (1994, xiv).

Diotima binds *Eros*, the binding element of totality, to immortality and the means available to mortals for gaining it: birth (τόκος; Pl. *Symp.* 206b.7–8). Insofar as mortal beings bear a trace of immortality in the bodied process of generation, the further elaborated binding operation of *Eros* produces a totality bound together by generation: since it is ever-emerging (ἀειγενές) and undying (ἀθάνατον), in this way there is genesis in dying (206e.7–8). In the phrase ἀειγενές ἐστι καὶ ἀθάνατον Plato binds immortality to genesis, perhaps reflecting on and reconfiguring the Hesiodic phrase ἀθανάτων ἱερὸν γένος αἰὲν ἐόντων—the sacred *genos* of the never-dying everlasting ones (e.g., Hes. *Theog*. 21, 105). *Theogony* itself, in its genealogical unfoldings, makes clear that the latter phrase is one of those *pseudea* the Muses are capable of delivering that resemble genuine truths (ἐτύμοισιν ὁμοῖα) (Hes. *Theog*. 27). From immortal to mortal ontological zones courses the energy of immortality in the form of genesis, and beyond a mode of interpretation and conveyance that sustains the ontological distinction, Diotima renders in *Eros* an image also of a body that gathers and enfolds all other bodies in its belonging to the immortality-genesis pair.

Artifactual Totality[6]

1. Zarathustran

The sky as a bronze covering limits the kosmos in Zarathustran cosmology. In a translation of *Yasht* 13, the earth is covered by the bronze sky "like a bird its egg" (Skjaervo 2011, 64), fusing the images of artifactual and corporal totality. Noting challenges posed by a scarcity of sources and difficulties related to translation of some Zarathustran texts, as well as traditions of interpretation, redaction, and elaboration, Collinson, Plant, and Wilkinson describe a covering made of stone as the first phase in a sevenfold creation (2000, 5, 7). Within the covering the sources or prototypes first come into being and are then sacrificed by the "Bounteous Immortals" in a way that activates further generation and "the cycle of life and death" (Collinson, Plant, and Wilkinson 2000, 7). The rest of creation then unfurls in six further stages: water, earth, plant, animal, human, fire (*Greater Bundahishn* [= *GrBdn*] 1a.1–9, trans. Boyce 1990, 48, and 10–13 for discussion). An uneven division of the totality along gender lines accompanies the sevenfold cosmogony, according to which each region or entity of the "seven creations" aligns with a member of the divine Heptad. Four masculine beings (Ahura Mazda, Vohu Manah, Asha, Khshathra) take for themselves human beings, animals, fire, and sky (and/or metal; see Boyce 1990, 13–14), while the feminine beings of the Heptad, Armaiti (Spendarmad), Haurvatat (Hordad), Ameretat (Amurdad), forge connections with earth, water, and plants (*GrBdn* 3.11–19, trans. Boyce 1990, 49; Avestan and Pahlavi names from Boyce 1990, 13).

Expanding the image of the bronze sky, one text describes the sky as the barrier (or threshold) between limited and unlimited cosmic zones:

> First, He created Sky, bright, visible, high, its bounds afar, made of shining metal. And He joined its top to the Endless Light, and created all creation within the sky, like a castle or fort in which are stored all the weapons needed for a struggle.
>
> (*GrBdn* 1a.5–6, trans. Boyce 1990, 48)

The text transforms and elaborates the preliminary bronze artifactual image, suggestive of a lid or container, into an architectural one. Equally artifactual, the cosmic fortress reflects the emergent active condition of created beings in the world: more than a container or vessel in which beings create (initially inert) beings, the fortress is now a theater for the action of a struggle between forces of right and wrong (see esp. *Yasna* 30.3–4; and discussion in West 2010, 12–14). The divine being associated with the sky comes forward "like a heroic warrior" armed by the material of the sky itself (*GrBdn* 1a.5–6, trans. Boyce 1990, 48).

2. Homeric

Some phrases in the *Iliad* and the *Odyssey* intimate a similar view of the kosmos as in some sense an artifact. For example, the phrase οὐρανὸν...πολύχαλκον

(richly bronze heaven) in the *Odyssey* resonates with the art of metalwork and suggests a manufactured quality of the entire kosmos (Hom. *Od.* III.2). Also in the *Odyssey*, Odysseus describes the suitors' hubris and violence as reaching an iron sky (σιδήρεον οὐρανὸν; Hom. *Od.* XVII.565), again suggestive of an image of totality as forged and contained by limits produced through craft.

Similarly, and more thoroughly, the work of Hephaistos in the *Iliad* offers an extended parallel of manufacture and the *kosmos*. The well-known Shield of Akhilleus passage presents a vision of totality merged in an artifact, touched with a reflexive dimension, as the scene narrates also the image-making itself. The kosmos depicted on the Shield begins with a macroscopic image that sets in place a threefold arrangement of earth, heaven, and sea prior to the further elaboration of celestial features and then a rich variety of human activity, all within the boundary of the flowing stream of Okeanos (Hom. *Il.* XVIII.478–608; see Spitzer 2021a, 441).

3. Pherekydes

According to Diogenes Laertios, Pherekydes held a triad of primordial beings, Zas, Khronos (Χρόνος), and Khthonie, who becomes Ge when Zas gives her earth (γῆν) as a gift (Diog. Laert. I.11.119).[7] One report of Pherekydes' work includes an image of totality produced by Zas in the form of a great and beautiful cloth on which Zas has intricately embroidered (ποικίλλει; Pherec. KR 54)[8] an image of the "great divisions of the world" (West 1971, 19). The cloth is Zas' gift to Ge on the occasion of their wedding, and it is subsequently draped over a winged oak (ὑπόπτερος δρῦς; Pherec. KR 56). Like the Shield of Akhilleus, the artifactual image of totality in Pherekydes presents an image of image-making (not as detailed as the Homeric one), though here the image of totality bears cosmogonic significance within the scene.[9]

West has interpreted the tree as a transformation of Khthonie and as a double of Ge (1971, 20; 55–60). The tree in Pherekydes' image of totality has also been taken to represent the loom (Kirk and Raven 1957, 63), which accords nicely with the cloth woven by Zas. Both peplos and tree-as-loom emphasize the image's connection of a totality with artifacts and their production. Kirk and Raven, however, rejecting the tree-as-loom interpretation, read the tree as a chthonic substructure overlaid with the cloth as Zas' creation and arrangement of earth and sky (1957, 64–65); a fruitful comparison might be to the Assyrian cylinder seal depicting a similar scene (Couprie 2003, 169–170, fig. 3.2) Even in light of Kirk and Raven's interpretation, the image retains its connection between totality and artifact.

Dynamic Totality: Monistic and Elemental

1. Egyptian Philosophies

In a variety of forms, a monistic totality developed in Egyptian thinking. Focused on Atum, theological philosophy at Heliopolis seems to develop a monistic vision

of all things. Throughout the array of diversity the primordial being Atum expresses itself such that "the final product of creation in all its diversity is in one sense nothing more than the ultimate evolution of Atum himself" (Allen 1997, 122–123). Chapter 17 from the *Book of the Dead* both narrates and forms a ground for the continual performance of Atum's monistic totality. In its opening sequence, the text asks for performance through recitation in two regions, the West and earth, while it also announces the performative force it bears: "Now come into being all the words of the Lord of All: I was Atum when I was alone in the Primordial Waters" (*BD* 17, trans. Faulkner in Wasserman et al. 2015, pl. 7-A).[10] The person performing this phrase would be announcing the unity of self with Atum, an expression of the monistic entity that has unfolded itself into a diverse manifold of entities yet retains a fundamental identity with each member of that manifold. As the text continues it asserts, through its commentary apparatus, identity of a vast plurality of beings with the "I" of the reader and the divinity Re:

> I am the Great God, the self-created.
> *Who is it?* The Great God, the self-created, is water, he is Nun, father of the gods. *Otherwise said*: He is Re.
> He who created his names, Lord of the Ennead.
>
> (*BD* 17, trans. Faulkner in Wasserman et al. 2015, pl. 7-A)

The text and its apparatus, consisting of "vignettes" or illustrations along with "rubrics" that follow and explicate passages of the text and connect them to the appropriate ritual practices (Goelet in Wasserman et al. 2015, 158), press a reader to reflect on the monistic totality through its continual shifting of terms that repeat the operation of identity with the underlying unity: Atum, Re, Nun, and many others as the text continues. Nun, along with Nu and Nut, appear in very early Egyptian sources (ca. end of the third millennium) as entities preceding creation. Even as the creative movement, according to Allen, took place from one to many, that unity seems differentiated in its primordial condition into a fourfold: "wateriness (*nwj*), or inertia (*nnw*), the most basic qualities, enshrined in the names of the waters (Nu, Nun)," "infinity," "darkness," "uncertainty," or "hiddenness" (Allen 1997, 120–121).

Akhenaten's *Hymn to the Sun*, a text from the mid-fourteenth century, voices the singular entity encompassing, sustaining, and giving rise to all diversity:

> You are the One God,
> Shining forth from your possible incarnations
> As Aton, the Living Sun,
> Revealed like a king in glory, risen in light,
> Now distant, now bending nearby.
> You create the numberless things of this world
> From yourself, who are One alone—
>
> (trans. Foster 2001, 6)

Even as, in Foster's reading, the hymn concentrates on the visible aspect of the one divinity (2001, 1), generation of the manifold from a single divine entity whose monistic character is stressed ("You are the *One God*;" "…who are *One alone*" [emphasis added]) nevertheless intimates the invisible unity pervading totality.

More explicitly, in the *Leiden Hymns* (*LH*) of the thirteenth century the "God of the myriad visible forms," Amun, emerges as an image of totality in unity: "all that exists is His spirit" (*LH* CC, DC; trans. Foster 2001, 163–165). In Amun the philosophers at Egyptian Thebes could present the unknown quality of the monistic divine entity. As such, Amun sustains a tension of multiformity with his uniqueness: both "one alone is the hidden God, / being behind these appearances" and threefold as Amun, Rê, Ptah (*LH* CCC; trans. Foster 2001, 166). The threefold enables the manifestations of plural entities while preserving an aspect in excess of intelligibility. Locating Amun at once beyond the limits of the created world and within each entity, Theban philosophers could give an account both of the existence of the manifold, formed by the creative entity Amun, and of a unique being that "exists apart from nature, as unknowable" (Allen 1997, 126–127; see also Forman and Quirke 1996, 10).

2. Taittirīya Upanishad

To his son Bhṛigu's request to be taught Brahman, Varuṇa articulates a sixfold of elements following the opening verse prayer of the Bhṛigu Vallī (= BV) section of the sixth or fifth century *Taittirīya Upanishad* (= *TU*; Olivelle 1996, xxxvi–xxxvii): "Food, life-breath, / sight, hearing, mind, speech" (*TU.*BV.1; trans. Katz and Egenes 2015, 127). As Bhṛigu explores each element of the list he discovers that Brahman constitutes each one, though in a way that suggests Brahman forms the dynamic through which the totality cycles. The phases of this cyclical dynamic register as the from-which or source, the sustaining principle, and the to-which according to which each entity manifests as a differentiated being. Bhṛigu's insights, based on his father's teachings, reveal that each moment of this dynamic is Brahman, but also that the dynamic accommodates variation, substitution, re-articulation. Brahman does constitute this elemental sixfold and the dynamic motivating it, yet it also exceeds these determinations, as the reduction of sixfold to fivefold, the reorganization of the members of that sixfold, and the substitution of terms in Bhṛigu's inquiries intimate: the order of the inquiry shifts as it unfolds, with mind assuming the third position, and a substitution of terms takes place, where "intelligence" and "bliss" enter the final two aspects Bhṛigu's investigations cover (*TU.*BV.4–6, respectively; trans. Katz and Egenes 2015, 128–129). Even as the image of totality stresses the unity of being in-as Brahman, it also offers a dynamic of variation and substitution—of change and differentiation—that re-performs the ever-shifting and even aleatory aspects of the totality. Yet, the text's repetitions permeate this dynamic image in its variations with a sense of the unity it expresses and complements, where the dialogue between father and son that closes each section of Bhṛigu's inquiry acts like the closing of a circle, the text returning its variations to Varuṇa's insistent heuristic and the narrative's confirmation that

Bhṛigu undertakes it: "'Seek to know Brahman / by going within. Brahman is found within.' // He went within" (*TU.*BV.1–5; trans. Katz and Egenes 2015, 127–129).

Producing an image of this dynamic totality much like that of the *Leiden Hymn*, where in both the unifying entity appears "in the beginning" and extends into and as a totality in all its diversity: "When Being began back in days of the genesis, / it was Amun who appeared first of all" (*LH* C, trans. Foster 2001, 162), in the *Brahmānanda Vallī* (BrV) *TU* unfolds a cosmogony whose originary source persists through the manifold:

> In the beginning, all this was not-being.
> From that, being was born.
> That fashioned itself by itself.
> Therefore it is called well made.
>
> That, being well made, is truly the essence.
> Surely by grasping the essence, one is filled with bliss.
> Who indeed would breathe, who would be alive
> if this bliss did not pervade space?
> For this essence alone bestows delight. (*TU.*BrV.7; trans. Katz and Egenes 2015, 123)

The essence of the self-fashioning transformation of non-being into being permeates and unifies the totality. Amidst this permeation of Brahman, seeming opposite states—form and unformed, articulate and what defies articulation, stability and instability, reality and its other—join and suffuse the totality as resonances of the creative entity's desire to "become many" (*TU.*BrV.6; trans. Katz and Egenes 2015, 122). Hidden yet revealed, present yet withdrawn, Brahman comes forward as an image of the dynamics of elemental-monistic totality.

3. Theano

Number and order are elemental in Theano's corrective to a popular misconception of a Pythagorean image of totality. According to the misconception, Pythagoras had posited that all things arise *from* number; something like this can be heard in the opening few phrases of a long passage Diogenes Laertios includes in his doxography:

> Of all things a *monad* (μονάδα) is a source (ἀρχὴν); from the monad a boundless (ἀόριστον) dyad they set down as matter for the monad, being a cause; and from the monad and the unlimited dyad the numbers; from the numbers, points; from these, lines, from which the flat shapes; from flat shapes, solid shapes; and from these the perceptible bodies whose elements are the fourfold: fire, water, earth, air.
>
> (Diog. Laert. VIII.1.25; my trans.)

If monad is taken to be already a number (one), the different understanding Theano addresses becomes clear in the opening phrase: of all things *one* (μονάδα) is source.

Monad, however, seems to describe something other than number—in the passage, the monad and the dyad (and presumably their relations) are prior to and engender numbers. The word μονάδα (monad) reverberates as that which stays apart and is alone (μονάς) as the unit, a base for determining relations; another source reports that for Pythagoreans monad names fire (Plut. *Num*. 11.1). Apart from a dyad without boundaries (ἀόριστον δυάδα), monad works as cause (αἴτιος) and source. Monad exists in some way as both unlimited and limited: unlimited in its undifferentiated condition and limited insofar as monad enters a limitation through its generation of the dyad (for then there is another entity that is *not* monad). The dyad, in turn, remains unlimited insofar as it continuously differentiates, but limited (or enmeshed in a dynamic limitation) in that it retains its dyadic character. Yet, in remaining separate, monad risks dissolving its monadic identity if it undergoes self-differentiation that gives rise to the unlimited dyad; for monad to remain even in the presence of the dyad its separateness must not be in relation to the dyad, since it would then be either one component of the dyad or an addition to it, rendering a triad. In this difficult to discern aspect, Pythagorean monad approaches the quality of τὸ Χάος in Hesiod's *Theogony* as Drew Hyland has interpreted it, namely as a prior condition of difference or differing (2005, 13–15): like Hesiod's τὸ Χάος, but also intimately resembling the Egyptian monistic images of totality,[11] particularly that sung in Akhenaten's *Hymn to the Sun*, monad names an activity of separation that is fundamentally *prior* to separable entities. For the present study it remains important to see the longer and variegated history of this thought—as in its action in the very ancient *Hymn to the Sun* and other images of monistic totality. In Diogenes Laertios' biographical sketch, Pythagoras not only traveled to Egypt, but learned their language and was initiated into their mysteries (Diog. Laert. VIII.1.2–3).

Reasoning that generation from a non-being such as number is impossible, Theano reconfigures the crucial role of number in the kosmos:

> I have learned that many Greeks think Pythagoras said everything is created from number. This statement itself raises a question. How can what does not exist (μηδέ ἐστιν) think and reproduce? But he did not say everything is derived from number, but everything (πάντα) is generated *according to* number (κατὰ δὲ ἀριθμὸν), that the primary order (τάξις πρώτη) is in number. By being part of it [the primary order], a first and second and the rest that follow are the order for things that are counted.
>
> (trans. Pomeroy 2013, 67; my italics and interpolations of Greek text from Stob. *Ecl.* 1.11.13)

Instead of being generated *from* number, Theano explains that the totality (πάντα) emerges *according* to number. On one level, as Mary Ellen Waithe has

observed, Theano brings attention to a difference between analogy and definition: the emphasis falls on the type of ordered relation numbers express that can be applied fundamentally to things and beings, too. Such relation is grounded in differentiation, the ability "to specify the physical parameters of the thing: it begins here, it ends there, and between the beginning and the end is one object" (1987b, 13). The distinction between analogy and definition opens a way for Theano to gesture towards identification and differentiation.

Within number moves what Theano calls τάξις πρώτη ("primary order") that enables differentiation in the form of enumeration. Theano maintains a non-identity of order and number, so that number comes forward as one relation or moment in the dynamics of the primary order thought as a generative active principle: if the primary order encompasses generation, and generation is not *from* number, and number is not the primary order (exclusively), then the primary order will also contain a source (power, dynamics) of generation other than number. Generation of a totality begins already in a plural condition because primary order exists in, but exceeds, number. The primary order is then continually and multiply arrayed both within a non-being (number, μηδέ ἐστιν) and other than a non-being—that which does exist, beings who think and reproduce.

Generation according to number seems to address the separation entailed in generation, the differentiation constitutive of both thinking and reproduction (these are bound up in Theano's question). Beyond generation and its linkage with enumeration, however, Theano has left room for a totality to be also other than according to number, other, that is, than identifiable in the manner of counting and enumerating that specifies parameters and delineates objects. Theano's primary order remains open for beings of a totality to exceed the enumerable identities attached to them in accordance with number not (necessarily) in generation,[12] but in being and in a mode of thinking not bound up with enumerated and enumerable identities.

Conclusions

What have been termed dynamic images of totality are likely most familiar, in part because they take place within the interpretive matrix of Aristotle: they refer the totality to one source or many, which may be moving or unmoving, limited or limitless (Arist. *Ph.* II.2 184b.15–25). Milesians, as well as Xenophanes and Empedokles, for instance, in setting up elements within cosmogonic or cosmologic schemes develop dynamic images with monistic and elemental features. While the images in the Egyptian texts and the *Taittirīya Upanishad* seem to agree that the monistic element is coextensive with the totality, in Theano there is a sense in which the totality exceeds the bounds of the monistic element, assuming number to take that place. This assumption builds on the identification of the view provided in Diogenes Laertios' narrative with that which Theano reconfigures, which depends on an identification of *monad* and *dyad* with number in some essential way. Such a view of totality's excess might surface in Parmenides, suggested in the image of all things (πάντα) piercing/passing-through/while being

(περῶντα/περ ὄντα) through the singular whole (διὰ παντὸς; DK B1.32). The cosmological sections of the Parmenidean poem, as well as the potent images within the Way of Truth, may elaborate that image, showing that beings in their continual diversifications exceed being.

In corporal images of totality, differentiation tends to precede and condition the whole. These forms of totality do not allow for a unity that would reduce the manifold to a single entity as source. The "before two things" primordial state of the Egyptian corporal images of totality involve an originary entity (Allen 1997, 120)—model, perhaps, for the Pythagorean *monad*—whose being seems to be the movement of differentiation not fully locatable in any other being, i.e., the differing, or evolving, or fissioning. That this primeval entity has multiple names—Nun, Atum, Amun who "uttered himself into visible form" and who is "self-created" (*LH* C, trans. Foster 2001, 162; see also *LH* CC, trans. Foster 2001, 163–165; and see Forman and Quirke 1996, 8)—does not indicate mere inconsistency or discontinuity, but rather, because words "embody the essence of their object" (Forman and Quirke 1996, 10), a sense of diversity inherent to the event of beginning. In Diotima's image of totality the metaphorics of Eros presupposes the differentiation of generation and coming-to-be.

Each of the constellations is formed from philosophic images of totality from various regions and periods. In the Greek archaic period, texts produced in earlier epochs and their traditions remained, as the case of Egypt and the specific circumstances of the Shabaka stone illustrate. Beyond textual images, oral traditions sustain images and create conditions for their reformulations as they change locales and languages. Mobilities in the forms of migration, language, and translation characterize, condition, and quicken the constellation or nexus of cultural imaginaries. Trade, travel, displacement, hostility bear people into new locations and connections: West finds particularly important the displacement of the *Magi* in the mid-sixth century (1971, 240–241), and Burkert traces migration of three groups (skilled workers, healers, singers/poets) throughout *The Orientalizing Revolution* (1992). Some migrations relocate people, in which case the imaginary of the place of departure remains active in the engagement with the place(s) of relocation; Pythagoras and Xenophanes experienced such migration (Diog. Laert. VIII.1.1–3; IX.2.18, respectively), and Parmenides lived in a community founded by a population in diaspora (Hdt. I.163–67).[13] The nexus of cultural imaginaries is mobile in a linguistic sense in that it surfaces in texts composed in different languages (see Marciano 2018, 4–11). In this way translation also bears significantly, though in a way that exceeds the linguistic. As images flow across languages via human interactions, they change: at times they are merged with other images already present, while at other times they evolve through, and are transformed by, their relations with the extant images in a given place. As Burkert puts it, "Images and possibly narrative motifs become ambiguous in the sphere of intercultural contacts; they are understood in different ways, from different sides; they form new constellations" (1992, 87). Mobilities such as these recognize the various ways images are reconfigured when they become part of a different web of relations.

The mobilities through, in, and as which images of totality are formed bring to light an important facet of the study of early Greek thinking. Not only does the wider Mediterranean context recommended by Tony Preus inspire new ways to think about ancient Greek philosophy, it also invites a questioning of the stability, usefulness, and dimensions of the cultural and/or ethnic category *Greek* and the disciplinary category of *philosophy*.

Notes

1 Preus challenges the notion of "the West," observing its appropriation of Greek philosophy (1992, 15).
2 On how the Parmenidean poem generates tensions through the interplay of its modes (textuality and orality), see Spitzer 2020b.
3 See, for instance, the stress on resemblance (ἐοικότα), which manages the work of images, in Xenophanes' thinking about knowledge (DK B35). In Parmenides, the entire project of thinking unfolds within the poem's richly polyvalent imagery. More specifically, images condition and are the atmosphere for thinking *being*, as in the shackles of Moira (DK B8.37–38) and the prohibition against shearing being from itself (DK B4.2).
4 See also the illustration in Forman and Quirke of another scene, slightly later, showing Nut separated from an ithyphallic Geb (1996, 9).
5 Wilson notes that the document is dated to sometime in the Greek archaic period, while suggesting the underlying "original text" is from the third millennium (1958, 1). But this dating has been contested (see Lichtheim 1973, 597–598 with references).
6 West gives a brief discussion of this type, "the idea of the world as a work of art done by a god," centering on Khronos as craftsman in Diphilos (mid-late fourth century) and Kritias (460–403), with reference also to Empedokles (1971, 54).
7 West finds that "Greek has no answer to offer" concerning the etymology and meaning of the name and looks instead to a Luvian deity named Šanta and the quest for a "'true' name" that would syncretize Greek and non-Greek divinities (1971, 51–52).
8 The translation "intricately embroidered" draws on Anne Carson's notes on Sappho 1 (2002, 357).
9 For a discussion from a different perspective on these artifactual images of totality, see Spitzer 2021a, 441–444.
10 Parts of this edition of the *BD* are not paginated, but give plate numbers in place of page numbers. Citations to this edition will give plate numbers where necessary.
11 On the comparison of τὸ Χάος and the "undifferentiated unity" figured in Atum, see Goelet in Faulkner et al. 2015, 152.
12 The statement allows for some things to be generated also *not* according to number.
13 For a discussion of how these events manifest in the thinking of Parmenides, see Spitzer 2020a.

Bibliography

Allen, James P. 1997. "The Celestial Realm." In Silverman 1997a, 114–31.

Bar On, Bat-Ami. 1994. "Introduction." In *Engendering Origins: Critical Feminist Readings in Plato and Aristotle*, edited by Bat-Ami Bar On, xi–xviii. Albany: SUNY Press.

Boyce, Mary, ed. and trans. 1990. *Textual Sources for the Study of Zoroastrianism*. Chicago: The University of Chicago Press.

Burkert, Walter. 2008/2009. "Prehistory of Presocratic Philosophy in an Orientalizing Context." In *The Oxford Handbook of Presocratic Philosophy*, edited by Patricia Curd

and Daniel W. Graham. Oxford: Oxford University Press. *Oxford Handbooks Online*, 10.1093/oxfordhb/9780195146875.003.0003.

———. 1992. *The Orientalizing Revolution: Near Eastern Influence in the Early Archaic Age*. Translated by Margaret E. Pinder and Walter Burkert. Cambridge: Harvard University Press.

Carelli, Paul. 2016. "Teaching Ancient Greek Philosophy as a Non-Western Tradition." *ASIANetwork Exchange* 23, no. 2: 150–63. http://doi.org/10.16995/ane.150.

Carson, Anne, trans. 2002. *If Not, Winter: Fragments of Sappho*. New York: Vintage.

Cherubin, Rose. 2009. "*Alētheia* from Poetry into Philosophy: Homer to Parmenides." In Wians 2009, 51–72.

Cohen, Signe. 2008. *Text and Authority in the Older Upanisads*. Leiden: Brill.

Collinson, Diane, Kathryn Plant, and Robert Wilkinson. 2000. *Fifty Eastern Thinkers*. London: Routledge.

Couprie, Dirk L. 2003. "The Discovery of Space: Anaximander's Astronomy." In *Anaximander in Context: New Studies in the Origins of Greek Philosophy*, by Dirk L. Couprie, Robert Hahn, and Gerard Naddaf, 167–254. Albany: SUNY Press.

Dougherty, Carol and Leslie Kurke. 1998. "Introduction." In *Cultural Poetics in Archaic Greece: Cult, Performance, Politics*, ed. Carol Dougherty and Leslie Kurke, 1–12. New York: Oxford University Press.

Eyre, Christopher. 1997. "The Boundaries of Knowledge." In Silverman 1997a, 90–103.

Forman, Werner and Stephen Quirke. 1996. *Hieroglyphs and the Afterlife in Ancient Egypt*. Norman: University of Oklahoma Press.

Foster, John L. 2001. *Ancient Egyptian Literature: An Anthology*. Austin: University of Texas Press.

Furlong, Iris. 1992. "The Mythology of the Ancient Near East." In *The Feminist Companion to Mythology*, edited by Carolyne Larrington, 3–22. London: Pandora.

Gemelli Marciano, M. Laura. 2018. "East and West." In *Ancient Philosophy: Textual Pathways and Historical Explorations*, edited by Lorenzo Perilli and Daniela P. Taormina, 1–40. London and New York: Routledge.

George, Lynda. 2007. "Gender Equity: In Search of Diotima's Place with the Ancient Philosophers." *Forum on* Public Policy: *A* Journal *of the* Oxford Round Table: 1–10. Gale Academic OneFile. https://link.gale.com/apps/doc/A192639843/AONE?u=anon~23f3200e&sid=bookmark-AONE&xid=3003aba9.

Greaves, Alan M. 2002. "The Archaic Period." In *Miletos: Archaeology and History*, 54–94. London and New York: Routledge.

Hawthorne, Susan. 1994. "Diotima Speaks through the Body." In *Engendering Origins: Critical Feminist Readings in Plato and Aristotle*, edited by Bat-Ami Bar On, 83–96. Albany: SUNY Press.

Heidel, Alexander. 1951. *The Babylonian Genesis: The Story of Creation*, 2nd ed. Chicago and London: The University of Chicago Press.

Hix, H. L. 2015. "Fire at Night: A Version of Herakleitos." *The Yale Review* 103, no. 2: 1–15. https://doi.org/10.1111/yrev.12242.

Hornung, Erik. 1987. "L'Égypte, la philosophie avant les grecs." Translated by Gilles Roulin. *Les Études philosophiques* 2/3: 113–25. https://www.jstor.org/stable/20848288.

Hyland, Drew. 2005. "First of All Came Chaos." In *Heidegger and the Greeks: Interpretive Essays*, edited by Drew A. Hyland and John Panteleimon Manoussakis, 9–22. Bloomington and Indianapolis: Indiana University Press.

Katz, Vernon and Thomas Egenes, trans. 2015. *The Upanishads: A New Translation*. New York: Tarcher/Penguin.

Kirk, G. S. and J. E. Raven. 1957. *The Presocratic Philosophers*. Cambridge: Cambridge University Press.

Lesher, James. 2009. "Archaic Knowledge." In Wians 2009, 13–28.

Lichtheim, Mariam. 1973. *Ancient Egyptian Literature*. Oakland: University of California Press.

Malkin, Irad. 2004. "Postcolonial Concepts and Ancient Greek Colonization." *MLQ: Modern Language Quarterly* 65, no. 3: 341–64.

Most, Glenn W. 1999. "The Poetics of early Greek Thinking." In *The Cambridge Companion to Early Greek Philosophy*, edited by A. A. Long, 332–62. Cambridge: Cambridge University Press.

Naddaf, Gerard. 2009. "Allegory and the Origins of Philosophy." In Wians 2009, 99–131.

Olivelle, Patrick. 1996. *Upaniṣads*. Oxford: Oxford University Press.

Pomeroy, Sarah B. 2013. *Pythagorean Women: Their History and Writings*. Baltimore: Johns Hopkins University Press.

Preus, Anthony. 1992. *Greek Philosophy: Egyptian Origins*. Binghamton: Institute of Global Cultural Studies of Binghamton University.

———. 1997a. *Notes on Greek Philosophy: From Thales to Aristotle*. Binghamton and New York: Global Publications, Institute of Global Cultural Studies, Binghamton University.

———. 1997b. "Wisdom Texts and Philosophy." *Tópicos* 13: 237–54.

Robinson, T. M. 1987. *Heraclitus: Fragments: A Text and Translation with Commentary*. Toronto, Buffalo, and London: University of Toronto Press.

Saggs, H. W. F. 1989. *Civilization Before Greece and Rome*. New Haven and London: Yale University Press.

Silverman, David P., ed. 1997a. *Ancient Egypt*. London: Duncan Baird.

———. 1997b. "Signs, Symbols and Language." In Silverman 1997a, 230–41.

Skjaervo, Prods Oktor. 2011. *Spirit of Zoroastrianism*. New Haven: Yale University Press.

Spitzer, D. M. 2020a. "Broken Light on the Ground of Home: Non-Being and Diasporic Trauma in the Parmenidean Poem." *Diacritics: A Review of Contemporary Criticism* 48, no. 1: 108–26. https://doi.org/10.1353/dia.2020.0004.

———. 2020b. "Figures of Motion, Figures of Being: On the Textualization of the Parmenidean Poem." *Ancient Philosophy* 40, no. 1: 1–18.

———. 2021a. "Divining: ΥΔΩΡ, Opacity, and Thalean Considerations." *Research in Phenomenology* 51, no. 3: 426–47. https://doi.org/10.1163/15691640-12341483.

———. 2021b. "Images in Archaic Thinking." *Epoché: A Journal for the History of Philosophy* 26, no. 1: 1–19. https://doi.org/10.5840/epoche2021816198.

Tessier, Linda. 1987. "Boundary Crossing: The Chaos-Cosmos Dynamic in Cosmogonic Myth (Egypt; Japan; Babylonia)." PhD. diss., Claremont, California: Claremont Graduate School.

Waithe, Mary Ellen. 1987a. "Diotima of Mantinea." In *Ancient Women Philosophers, vol. 1: 600 B.C.-500 A.D.*, edited by Mary Ellen Waithe, 83–116. Dordrecht, Boston and London: Kluwer.

———. 1987b. "Early Pythagoreans: Themistoclea, Theano, Arignote, Myia, and Damo." In *Ancient Women Philosophers, vol. 1: 600 B.C.-500 A.D.*, edited by Mary Ellen Waithe, 11–17. Dordrecht, Boston and London: Kluwer.

Wasserman, James, Raymond O. Faulkner, Ogden Goelet, J. Daniel Gunther, Eva Von Dassow, and Carol Andrews. 2015. *The Egyptian Book of the Dead: the Book of Going Forth by Day […]*. 3rd rev. ed. San Francisco: Chronicle Books.

West, M. L. 1971. *Early Greek Philosophy and the Orient*. Oxford: Oxford University Press.

———. 2010. *The Hymns of Zoroaster: A New Translation of the Most Ancient Sacred Texts of Iran*. London: I.B. Tauris.

Wians, William, ed. 2009. *Logos and Muthos: Philosophical Essays in Greek Literature*. Albany: SUNY Press.

———. 2019. "From *Logos* and *Muthos* to…." Introduction to *Logoi and Muthoi: Further Essays in Greek Philosophy and Literature*, edited by William Robert Wians, 10–17. Albany: SUNY Press.

Wilson, John A., trans. "The Memphite Theology of Creation." In *The Ancient Near East, vol. 1, An Anthology of Texts and Pictures*, edited by James B. Pritchard, 1–2. Princeton: Princeton University Press

3 The Gnomon as *Module* for Thales and Anaximander

A Technique is Always an Application that is Enveloped by a Theory[1]

Robert Hahn

Introduction

Anaximander made a seasonal sundial using a gnomon, and Thales measured the height of a pyramid by means of a gnomon. The technique of using a gnomon is an application that is enveloped by a theory. It is the purpose of this essay to unfold that theory that allows for the development of their techniques. The use of a gnomon deserves to be seen as a fruitful application of the search for the *One over Many*—or perhaps the better phrase that I am recommending is the *One under Many*—the origin and principle of things—ἀρχή, that *underlies* all appearances as an unchanging substrate capable of altering without changing. The *one* being sought is an unchanging nature or unity against which, or in terms of which, other things are organized, measured, evaluated, or assessed; it reveals multiplicity to be an illusion. Thales' ὕδωρ (water) or Anaximander's ἄπειρον (unbounded) were metaphysical answers to the search; they offered these to answer the question about the originating source of the cosmos and the underlying unity that always persists despite the appearance of qualitative change. But to understand the theory that envelops this technique, indeed that launched the technique, we need to re-set their metaphysical theory in the context of other contemporaneous cases where a discovery of the technique of *One under Many*—which is often described as *substance monism*, but which I shall refer to as *modular thinking*—was key to resolving other problems such as identifying the module in monumental temple architecture, the right triangle as geometry's fundamental figure, the στατήρ (*statêr*) or underlying unit of value in electrum, gold, and silver coinage, and even the process by which this underlying unity could appear so divergently in the analogy with the felting of wool. All of these inquiries belong to the sixth century.* And so, we must begin by setting out the wider framework that reveals the theory that envelops this technique of using the gnomon as module.

Aristotle claimed that the early Greek philosophers were "source and substance monists" (to use my terms); for them, there is no change only alterations of the basic stuff, believing there is nothing either generated or destroyed since

* All dates are BCE unless otherwise indicated.

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this sort of underlying nature always persists (καὶ διὰ τοῦτο οὔτε γιγνεθαι οὐθὲν οἴονται οὔτε ἀπόλλυσθαι, ὡς τῆς τοιαύτης φύσεως ἀεὶ σωζαμένης, *Metaph*. 983b11–15),[2] and at the end of the cycle all diverse appearances return to their original source-state. Criticism of Aristotle on this account took hold with Cherniss (1935) and was followed by other scholars who also emphasized important ways that Aristotle was an unreliable doxographer and often cast these early efforts within his own conceptual framework that was judged to be historically inappropriate. Recently, Graham (2006) joined that chorus specifically arguing that there was no evidence in the sixth century for "substance monism," though he follows Cherniss calling it "material monism." The use of this phrase, introduced by Cherniss and embraced by Graham and others, is misleading because there are no qualms about attributing *source* monism to these earliest philosophers—there was, no doubt, a single source, variously named ὕδωρ (water) by Thales, ἀήρ (mist-air) by Anaximenes, πῦρ (fire) by Heraclitus and Hippasus—indeed, ancient cosmogonies/cosmologies routinely begin by positing a single originating source of all things, whether it is the primordial waters, *Nun*, of the Egyptian Heliopolis Cosmology, or *Nammu* of the Sumerians, or *Atman* of the *Upanishads*. So, the early philosophers were at least some sort of monists. The denial that they were "material monists" was the denial that they were *substance* monists; what was denied was that, in the sixth century, there could be a conception of an underlying substrate—a *One under Many*—that could appear qualitatively different without substantially changing. So, while one might begin with water, and then claim that ice and steam seem to be modified forms of it, a different kind of thinking must be recognized if they held that fire and hard stone were modifications of water or air. To accept Aristotle's report, we need to come to terms with the claim that the earliest philosophers regarded the world of apparent multiplicity as an illusion, that hidden within the diversity we experience—contrary to our common sense—we could nevertheless discern a single underlying nature.

Four Case Studies

In a series of essays, I have been arguing, contra Cherniss and Graham, that in this specific case Aristotle's reporting is plausibly correct, and this is because we have evidence for the ideal of substance monism all around the Milesians and Ionian Greeks in the sixth century; that is, the claims of Aristotle in this matter are historically appropriate. But the arguments to support this defense of Aristotle's reporting come from contemporaneous activities vastly under-investigated by scholars working in ancient philosophy such as monumental temple architecture and building technologies, applied geometry and geometry, the monetization of Greek society in the circulation of coinage, and the production of industrial textiles in the felting of wool. When we review the early Greek philosophers, especially the Milesians, within their *technological* context, we see them as *modular thinkers*: this is the mentality of substance monism. The modular thinker holds that there is a single unity that *underlies*, and in terms of which all other multiplicities

are grasped as modifications or alterations. Let me try to make this central point clearer by summarizing what has already been shown in my earlier studies.[3]

Case Study #1: Building Ionian Monumental Temple Architecture using Column-Diameter as Module

In Didyma, in the very backyard of Thales and Anaximander, perhaps as early as ca. 580 with the limestone phase of the temple of Apollo Didymaios, and contemporaneously across the strait in Samos, which was their model of the temple of Hera (i.e., Dipteros I), the archaic architects succeeded in building their stone temples by means of modular thinking. The architects had a *One under Many*, that Vitruvius reports was "column-diameter,"[4] in terms of which all the other architectural elements were reckoned as multiples or submultiples of the module. In order to ensure that the temple plan or model would display the aesthetic sensibilities when built on a gigantic scale, they needed rules of proportion by which each architectural element would be scaled-up, or down, as a multiple or submultiple of the module. The temple exhibits the module altering without change (Hahn 2001, ch. 4, ch. 1; Hahn 2003; Hahn 2019b). In their application of this technique, for example, the architects of the more or less contemporaneous marble temple of Artemis at Ephesus, one of the seven wonders of the ancient world, made the column-height 9x the column-diameter; Anaximander identified the shape and size of the earth with a 3 x 1 column-drum and measured out the distances to the heavenly wheels of stars, moon, and sun, in earthly, that is, column-diameters—9/10, 18/19, 27/28 earth/column-diameters distanced—so that each wheel was 1 module in diameter or thickness. Anaximander not only made use of a modular technique, but moreover, he used the architect's module. The plausible reason he did so was that he came to imagine the cosmos as cosmic architecture, built in stages like the temple, the house of the cosmic powers (cf. Hahn 2001, ch. 4; Hahn 2003, 2010). From what we know of his book, the first Greek philosophical book in prose, it started from the very beginning of the cosmos and unfolded up until the present time; since the cosmos now was not as it once was at the beginning, his narrative is cosmological, unfolded in stages like the construction of a Greek temple.

Case Study #2: Building the Cosmos out of Right Triangles as Module

If Thales posited ὕδωρ as the unity underlying all appearances, then it seems reasonable to ask how Thales imagined that water changes to appear fiery at one moment and hard-as-stone at another. I have argued that Thales searched in geometry to discover the fundamental geometrical figure out of which, combined and re-packaged, water looks one way now, and another way then—he reached the conclusion it was the right triangle, the "lost narrative"; here is the beginning of the project of building the cosmos out of right triangles, the project preserved by Plato in *Timaeus* (53Cff). How he reached the conclusion that the right triangle was the fundamental geometrical figure is detailed elsewhere (cf. Hahn 2017b;

and forthcoming), but we will return to this theme shortly when investigating Thales' technique of using the gnomon. In any case, Thales' forays into geometry show his commitment to substance monism, that is modular thinking: the whole cosmos is built out of a single structure, the right triangle. To embark on the project of constructing the cosmos out of right triangles, it is necessary that there was some argument, some proof—at least by the standards of his day—or even a line of reasoning, that shows the right triangle is the fundamental geometrical figure. That "proof" was the so-called "Pythagorean theorem," preserved by Euclid in a more sophisticated form—not I.47 but rather the proof by similar triangles (Euc. VI.31). The key to this new reflection is to see geometry as a link between what Thales could have learned from the land-surveyors when he visited Egypt and his practical measurements of the height of a pyramid and distance of a ship at sea, on the one hand, and the metaphysics of source and substance monism, on the other. Geometry provides the now "lost narrative" connecting the two (Hahn 2017b, forthcoming).

Case Study #3: Coinage uses the Statêr *as Module*

Money, in the form of widely circulated coinage, introduces the counter-intuitive idea of a single substance underlying the plurality of things manifest to the senses. Since all empirical observation points to the multiplicity of phenomena, not monism, we can see how the origins of monistic thinking is also echoed by the contemporaneous introduction and circulation of coinage, an invention introduced in nearby Lydia and embraced and imported into Miletus in particular, and Ionia in general. Since money as a standard of measure provides an exchange value for all things, it can, in a metaphorical sense, become all things. Heraclitus expressed this idea when he said "All things are an interchange for fire, and fire for all things, just as goods for gold and gold for goods" (DK22 B90). Since fire, for Heraclitus, according to Aristotle, is the substance monism, then the connection between coinage and substance monism is explicitly acknowledged.

Within a monetized society, money becomes the source and substance of everything. Thus, the monetization of society in the widespread dissemination of coinage transforms the social mentality—or at least for that of the early philosophers Thales, Anaximander, Anaximenes, Heraclitus. All concrete objects now appear as manifestations of abstract, exchange value. Everything is at bottom the same homogenous substance, though they have various and different appearances; everything comes from that same source because everything is exchanged for that source. The volume of electrum coinage from Miletus between 600–530 could have amounted to a value between 900 and 1,300 talents (roughly 30,000–40,000 kilos) (Hilbert 2018). Since a *statêr* weighed approximately 14 grams (or less) we can imagine how many thousands of coins were produced from electrum alone (not including silver coins, of which a tremendous amount was produced between 565 and 546, perhaps as Kroisos was preparing for war with the Persians) especially when the smaller denominations are factored in, including 1/2, 1/3, 1/12, 1/24, 1/48, and even 1/96 (the *tetartemorion* that weighed a mere .15 grams!).

Imagine how many of these coins could be produced from more than 30,000 kilos of metal! How many tiny pieces of metal jingled in the purses of the Milesian citizens as they engaged in trade and commerce by means of coins? How different the mentality of the Milesians who lived in the first half of the sixth century must have been in comparison to that of their grandfathers, and the generations before them? And if we accept Aristotle's report in the *Politics* that Thales made a meteorological prediction of a bumper crop for the upcoming olive season, bought out the olive presses in Miletus and Chios whose monopoly he now controlled, and rented them out making a neat profit, then surely along with barter and trade, Thales received a hoard of Milesian *statêrs* (Arist. *Pol.* 1259aff). Considered in this context, Thales was surely aware of the transformative effect of coinage, and how a fortune could be evaluated in terms of the abstract value of Milesian *statêrs*.

Case Study #4: The Underlying Substrate AER Alters by Means of Compression, Analogized to the Felting of Wool

Anaximenes held that while ἀήρ is the module—the substrate—out of which all else is constructed, the process by which ἀήρ transforms into different appearances is rarefaction and condensation; as Theophrastus put it: "Anaximenes says that the underlying nature is one and infinite, like [Anaximander] but not undefined like Anaximander said, but definite…and it differs in its substantial nature by rarefaction and compression" (DK13 A5).[5] Anaximenes illuminated the process of cosmic transformations of appearances by the analogy with the felting of wool; the underlying substance remains the same but is modified in the process of compression (πίλησις) (Hahn 2017a, 187–209; Hahn 2019a, 610–615). I found a team of craftsmen on the west coast of Turkey not far from ancient Miletus and Ephesus still producing felt in the traditional way and photographed them making it; in the process I reached the conclusion that Anaximenes' main point was that cosmic transformation is the result of compression, and Aristotle had it right since there was only a single substrate modified in appearance but remaining substantially unchanged.

These four case studies—monumental architecture, geometry, coinage, and the production of industrial textiles—taken separately, and even more persuasively taken together, help us to see that Aristotle's report about the earliest philosophers is historically appropriate, and likely correct. At the same time, and in the same location, the architects and builders worked with a single unity, a module—column-diameter—underlying the divergent sizes of the other architectural elements, altered without changing. Positing an underlying unity—ὕδωρ—capable only of qualitative, not substantial, change, Thales searched in geometry for the fundamental figure, the building block out of which all appearances were constructed, and discovered it was the right triangle. Consequently, this insight gave rise to the project of constructing the cosmos out of right triangles; the right triangle is the module, underlying all appearances. The monetization of Greek society, specifically in the circulation of coinage in the first half of the sixth century in Ionia, provided the whole culture not only with a sense of an underlying unit of

valuation—the *statêr* or standard—and all other valuations that could be reckoned as multiples or submultiples of it, but moreover introduced the very idea that the value of all things could be estimated in units of electrum, gold, or silver coinage, and that coinage—abstract value—could transform into all things, and all things into coinage. The analogy illuminating cosmic transformation by appeal to the felting of wool showed not the structure but rather the process of how this underlying unity, this module—ἀήρ—could alter without changing. All appearances were the same underlying substrate, distinguished principally by compression; nature provides a principle of varying levels of compression producing modifications of the same basic stuff. Any doubts raised that the Greeks of the sixth century were not able to imagine the cosmos as having a single underlying nature capable of altering without changing—that Graham insisted was historically inappropriate—must come to terms with these examples, and doubtlessly others. For example, in a new study, Gregory argues that shipbuilding proceeded by means of modular construction. The Milesians were renowned for their skills at shipbuilding, and had provided them already by the end of the seventh century to aid Pharaoh Psamtik I to wrestle control from the Nubians and so reunite all of Egypt under a single king. And so when Thales ventured to Egypt where he measured the height of a pyramid, he almost certainly traveled by ship; thus, here, yet again, was set before him an exemplar of modular construction (Gregory).[6]

The case I now propose to add to these, for which I have argued previously but only indirectly, shows how the *gnomon*, an underlying unity, along with the varying shadows that it casts, offered a module against which other distances, heights, and periods of time could be measured, and so further supports Aristotle's claim that the earliest philosophers were modular thinkers, that is, substance monists. Let us be clear that the gnomon, like column-diameter and the *statêr*, is arbitrarily selected; as modules for building or commerce, some other portion of the temple could have been selected, say architrave length or height or even the moldings,[7] or a *statêr* of different weight chosen, say exactly 10 grams. Once chosen, the module was expressed as multiples or submultiples depending upon the applicable rules of proportion for that technique. But an investigation of the gnomon allows us to see two other aspects of this technique that help unfold the theory that is enveloped by its application:

(i) the gnomon unveils the underlying vision of microcosmic-macrocosmic reasoning; and
(ii) the gnomon reveals the relation between an object (gnomon) and its projection-as-shadow, and consequently the illusion of mistaking the shadow that changes for the reality that casts it that does not change; the world of our experience is to the shadow as the shadow is to the unity that casts it.

The gnomon and its shadow provide a module, a *model*, in terms of which the little world reveals the structure of the big world, altered without changing; it casts the big world as *similar* to the little world; by geometrical analogy, this means the big world is the same shape, has the same underlying structure, but different size.

The big world is the little world writ large, a scaled-up model. Thus, the cosmos is envisaged as vastly interconnected, whose very structure interpenetrates things great and small. We can come to grasp the height of a gigantic pyramid, inaccessible to us, or even a narrative about the faraway sun and the passage of seasons in a sundial, by means of this model because they both share an interpenetrating structure. That structure is revealed by the gnomon. The gnomon is a shadow-casting instrument; no one shadow belongs to the gnomon, but when the sun's light falls upon it, the gnomon and its shadow form a model, and the details of that model reveal deep insights into the measurements of other things.

When we place together Anaximander's sundial and Thales' measurement of pyramid height, two fascinating conceptions of space and time are at once distinguished and integrated. On the one hand, Anaximander's gnomon casts a shadow that allows us to see the passage of time; that is, that the measurement of space (i.e., its shadow) measures time. On the other hand, Thales' gnomon casts a shadow that allows us to measure space—pyramid's height—by stopping time. But, to describe it this way overlooks something crucial. Anaximander's seasonal sundial, identifying the solstices and equinoxes—that is, the beginning of each new season by shadow marks on a prepared surface—stops time in the process of measuring space. By identifying the shadow markers for the beginning of each season, he stops space at some point on the shadow catchers in Sparta, to measure time. Thales' stops time (of day) both when shadow = height and when shadow ≠ height but is proportional to it, to provide a measurement in space; he stops time at whatever increment to measure space.[8]

One of the deep insights that accompanied the origins of geometry in Greece traceable to Thales—that is, the beginning stages—is that the *knowledge* of geometrical objects was not like the knowledge we get from our sense experience. The objects of perception—hearing, touching, seeing, tasting, and smelling—are objects that continuously change. While establishing a right angle between floor and wall is essential for the success of a temple architect or house builder, the angle achieved is never exactly a right angle; the successful temple or house stands erect because the angle is *close enough* to a right angle, but is never exactly a right angle, indeed there could be no measurement with such a precision, and no method to confirm such a precision. Rather, it is the *ideal* of a right angle that guides the builder, with construction plumb and set-square, to erect walls at right angles to the floor. The ideal is perfect but not the material that is always recalcitrant to some degree. This is another aspect of grasping that space and its objects become accessible only when time is stopped, that the geometrical ideals do not exist in our time-bound world. What happened at the very beginning of geometry for the Greeks, a beginning started by Thales and Anaximander, is that geometrical objects were conceived as a new kind of knowledge; they were eternal, non-changing objects, graspable by the mind but not the senses. Thus, the knowledge of space and the objects in it presupposes a way of stopping time, and at once reveals a capacity not available to the senses, and thus a different kind of knowledge. The knowledge of an object that does not change, an underlying unity, is yet another case in support of Aristotle's report.

By imagining an object, such as a pyramid's height, by stopping time, Thales, through geometry, gained an insight into newly discovered capacities of human knowledge, and the awareness that contrary to our common sense, there was a field of objects that do not change. Anaximander is credited with writing an outline of geometry (ὅλως γεωμετρίας ὑποτύπωσιν ἔδειξιν; Suda s.v. Anaximander [= DK12 A2]); to wonder what precisely was contained in it offers a fascinating occasion for reflection, but surely, it contained a theory that enveloped the use of the technique for making a seasonal sundial whether or not it was explicitly stated. Through geometry, the thoughts of Thales and Anaximander entered a world that transcended time and change, that revealed a new intellectual capacity and disclosed an underlying ground of unity. But, the springboard to this abstract and speculative thought came by means of, and through, sense experience, not merely by rejecting it.

Thales' Measurement of the Height of a Pyramid

Metaphysically speaking, the idea of *substance monism* defies common sense. Our experience is of a world of multiplicity; the embrace of substance monism, however, affirms that there really is no multiplicity but only a single underlying unity capable of appearing diversely. The world of diverse appearances consists in modifications of an unchanging unity that underlies, hence the earliest philosophers searched for that *One under Many*. To reflect upon it as modular thinking is also to think of *module* as *model*. In measuring pyramid height, the shadow cast by the gnomon forms a model. The model reveals the shadow and invites us to think about the world as a shadowy illusion, a projection of something else, something more real; for while the shadow is not the object but a projection of the object, it holds a clue to the gnomon, the standard, that casts it.

We have the testimony that Thales measured the height of a pyramid when its shadow was equal to its height, and when unequal but proportional. On several occasions my students and I performed the measurement on the Giza plateau when shadow length was equal to height and discovered important things that Thales surely realized when he tried the same kind of measurement. The first photo (Figure 3.1) was made in May 2013, the second (Figure 3.2) in May 2018, sun due east, at a time when shadow length = gnomon height, and hence shadow length = pyramid height.

More than one of my professors, many years ago, suggested that there was nothing particularly scientific about Thales' measurement when "shadow = height"; clever Thales simply observed that there was a time of day when everyone's shadow was equal to their own height and measured the pyramid's shadow then. The measurement could *never* have happened this way. First of all, Thales had to imagine the measurement of an isosceles right triangle, by means of a gnomon that confirmed precisely the time was right for height = shadow length, and so the measurement had to be made through reasoning about similar triangles, specifically that the little world of gnomon and its shadow shared the very same structure as the inaccessible pyramid height to its shadow (Figure 3.3).

Figure 3.1 23 May 2013: Two gnomons are set several yards apart in the ground next to the base of a pyramid at Giza, one at the end of the pyramid's shadow.

To be even more precise, he needed a gnomon with a very sharp point (measuring a shadow cast by your own height is the right idea, but insufficiently precise), and likely made a circle with the use of a piece of cord equal in length to the gnomon's height, and using gnomon height as the radius of a circle, scratched out a circle in the surrounding sand with the gnomon at the center, or on a platform of hard stone prepared in advance and set carefully near to the pyramid's shadow or even at the very end of the pyramid's shadow.[9] When the shadow cast by the tip of the gnomon touched the circle then the time was right for the measurement (i.e., for then, at that moment, every shadow was equal to the height of a vertical object that cast it, including the gnomon). Thales was then in a position to realize that the sun had to be half a right angle of inclination, or what we today call 45°, because only when the sun is at half a right angle is the shadow equal to the height, and this means that the two legs of the isosceles triangle are equal in length, one of the propositions attributed to Thales.[10] To reach this conclusion that each of the two angles, in addition to the right angle at the base, were each equal to half a right angle, he had to have known that the angles of every triangle sum to two right angles, and I have already established that elsewhere (cf. Hahn 2017b, 31, 124, 214).

Figure 3.2 23 May 2018: Two gnomons are set several yards apart in the ground next to the base of a pyramid, one at the end of the pyramid's shadow.

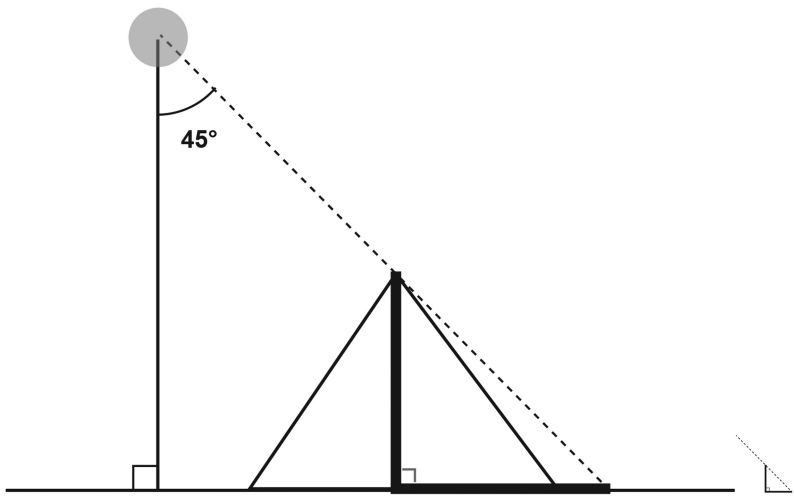

Figure 3.3 Pyramid measurement when shadow = height. Similar right triangles [isosceles right triangles].

Now, since the pyramid conceals most of its shadow under it, which is the case when vertical height = shadow length, how do we measure the shadow *under* the pyramid? Since the pyramid is aligned almost perfectly to cardinal directions, and the base is square, the only way to determine *precisely* the amount of shadow under the pyramid is to make the measurement when the shadow projects perpendicular to the edge of the pyramid. For then one can reason that the distance from the center of the pyramid to its edge (concealed under the pyramid) is half the length of any side since the base is square, and this distance can be added to the measurable, projected shadow to deliver an accurate measurement of the pyramid's shadow, and hence its height. If the shadow projects at an angle that is not perpendicular to the edge, trigonometry would be required to correct the angle, to precisely straighten it out, which the Greeks at that time did not have. Thus, for the successful measurement, the sun must be due south, east, or west (it is never due north in the northern hemisphere) and also at half a right angle because only then does the shadow project perpendicular to the edge of the pyramid. Surprisingly, this happens only four days a year (Hahn 2017b, 103)—which is why my professors from long ago were mistaken in supposing there was nothing scientific in Thales' measurement of pyramid height—and the window of time is especially short due east and due west (about five minutes, two days a year, and only slightly longer when due south, also only two days a year; by today's 2020 calendar,[11] due east and west, 23 May and 19 July; and due south, 1 November and 9 February). Had Thales made the measurement when shadow length equals vertical height, he must have made a solar calendar, otherwise he would not have known when these circumstances would likely come together to make that measurement. To think that Thales just went to the Giza plateau any day, waited for the gnomon's shadow to be equal to its height—which cannot be done, in any case, from mid-October through early-February since the altitude of the local noon sun does not even reach 45°—and made the measurement then, shows only that one does not understand the dynamics and difficulty of this measurement.

That Thales made a solar calendar fits seamlessly in the context of Anaximander's seasonal sundial. Thales is credited with a book called *On the Solstices and Equinoxes* (Hahn 2017b, 92–93; see also Burkert 1972, 416ff), and whether Thales wrote it or not, this measurement when pyramid height = shadow length suggests just the kind of knowledge that Thales would have needed—a solar calendar—in order to know when to come to the Giza plateau to make this measurement, because only on four days in the entire year is the sun both at half a right angle and due east, west, or south. Only then could the shadow length be measured accurately by means of the royal cubit cord that the surveyors carried (see Hahn 2017b, 102–104). And it is tempting to think that the report in Ps.-Plutarch that Pharaoh Amasis marveled at Thales' measurement because the use of the royal cubit cord offered an answer in royal cubits, an answer that the *Rhind Mathematical Papyrus* shows that the Egyptians could have known. Only if Thales' number of cubits was close to what the Egyptians already knew how to calculate, would the result be something for a Pharaoh to marvel at. How could the Pharaoh have marveled at Thales' measurement if it was given in Greek feet

(DK11 A21, quoting Ps.-Plutarch; see also Hahn 2017b, 107–110)? And yet, it must continue to be a source of curious wonder why none of the three testimonies about Thales' measurement of pyramid height supplies a number (see Hahn 2017b, 97–110),[12] or a unit of measure, and so must remain a point of conjecture. Let me add one more point usually missed in the secondary literature. Amasis ascended to the throne in 570 and if we accept this testimony we must realize that Thales' measurement took place *after* that date, and would be long after the limestone phase of the archaic Didymaion began a decade earlier, a time when exacting measurements would have been already on display to the Milesians by the architect and builders.

Thales is also credited with measuring pyramid height when it was unequal but proportional to a gnomon's height and, once again, if we allow ourselves to imagine the diagram that plausibly burgeoned in Thales' mind, it also involves right-angled similar triangles. This measurement could be achieved most of the days of the year at local noon when the sun crosses the meridian, or stated differently, was due south, the moment when the sun is highest in the sky on that day and casts the shortest shadow from a vertical gnomon. It could not have been done close to the summer solstice when the sun was highest in the sky at Giza, for then the shadow cast at local noon (= due south) did not escape the face of the pyramid, and so could not have been measured (Figure 3.4).

Let us keep in mind that this measurement, like the one where shadow length = gnomon height, makes use of the very same gnomon—here is the underlying unity. Now, its projected shadow is longer. The model has changed gnomon-height:shadow-length, but not its modularity. Whatever the new model reveals by the gnomon, this is the very same modular relation that will be displayed by all vertical objects, on the condition that time has been stopped. One and the same underlying unity projects a limitless number of shadowy objects, all of which are

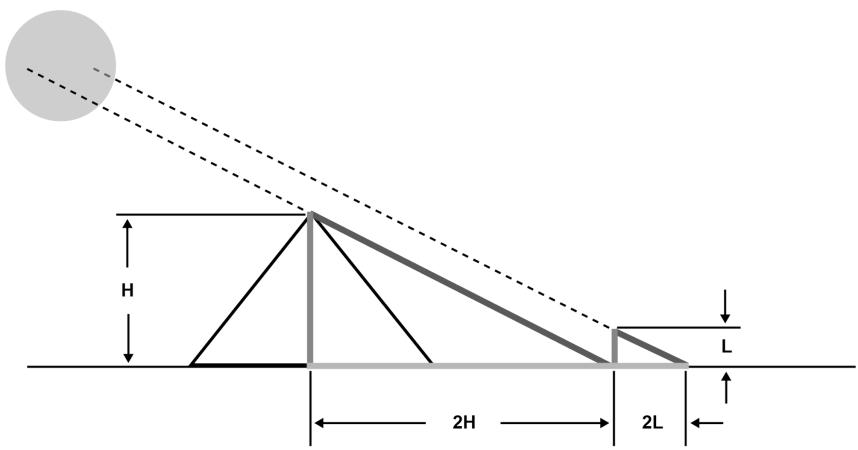

Figure 3.4 Pyramid measurement when shadow ≠ height. Similar right triangles [scalene right triangles].

alterations or modifications of the module that remains the same, that persists throughout.

Anaximander's Seasonal Sundial

Anaximander is credited with introducing the gnomon into Greece; he set one up on the sundials in Sparta.[13] By means of a gnomon he marked out the solstices and equinoxes—that is, he marked out the relevant shadow points identifying the beginning of each new season, each and all determined by the gnomon (DK12 A1 [= Diog. Laert. II.1–2]; and Suda s.v. Anaximander [= DK12 A2]). As we have seen, Thales is credited with using a gnomon to measure the height of a pyramid (Diog. Laert. I.27; Plin. *HN* XXXVI.12, 17; Ps-Plutarch, *Epit*. III.10). Let us be clear that a gnomon is any vertical rod, whose size is arbitrarily selected, just like column diameter, or the weight of an electrum, gold, or silver *statêr*, and yet by means of it, the organization, heights, dimensions, or values of other things are calculated.[14] Thus, here again, modular thinking presents an ideal of substance monism: there is an underlying unity—the gnomon—that, because it remains substantially unchanged, offers insights into all the other things measured or evaluated against it. For both Anaximander and Thales, microcosmic-macrocosmic reasoning is at play; because the little world (i.e., gnomon and its shadow) and big world (vertical objects and/or the sun and their shadows) are imagined to share the same structure—they are *similar*, one can infer things about the big world having access only to the little world. The sundial takes solar events and reduces them to a model, that is, the big world scaled-down; the pyramid's shadow, evaluated against the one cast by the gnomon at the same time, reduces the gigantic pyramid to a model, a module, and while its height is inaccessible, Thales invents a scale, a type of ladder—proportional scaling—to mentally ascend to the top: as the shadow length is to the gnomon height, so the pyramid's shadow length is to the pyramid height. We should keep in mind that a technique is always an application that is enveloped by a theory (see Serres 1982, 86).

The earliest surviving Greek sundials date to Hellenistic times; they are conical or hemispherical. While these shapes make sense for those who imagined the sphericity of the earth, they do not fit well for Anaximander who imagined the earth as a flat cylinder on analogy with a column-drum. In the absence of a surviving sundial from archaic Greece, the appearance of Anaximander's sundial must remain conjectural. But since Anaximander identified the shape and size of the earth with a 3x1 column-drum, and is credited with making the first Greek map of the inhabited earth, it is tempting to imagine the gnomon set up in Sparta on a column-drum, in place of the *empolion*, or in any case on a circular disk-shaped surface. The shadows cast on the surface would be *similar* to the ones cast on the earth itself, and on this surface the map might also have been inscribed (see Hahn 2010, ch. 6),[15] in addition to a portable *pinax* (DK12 A6, *apud* Agathemerus and Strabo). In any case, the seasonal sundial reveals time-tested experience in observing and interpreting shadows. Such experience only strengthens the plausibility

that Thales measured the height of a pyramid by its shadows. Let us then explore what the gnomon set up on a column-drum would reveal as seasonal markers.

The sun rises in the east and casts the longest shadow of the morning as it peaks over the horizon. As the sun appears higher and higher in the sky, the gnomon's shadow cast on the west side of the surface becomes shorter and shorter. At a time midday when the sun casts the shortest shadow, let us call this *local noon* and mark that shadow point on the circular surface. At that moment, the sun is due south and in modern terms we say it crosses the meridian. Then, as the afternoon continues, the sun is observed in the western sky casting the gnomon's shadow on the east side of the sundial surface, becoming longer and longer until it is longest in the afternoon just before it disappears below the horizon. If Anaximander carefully marked all the local noon shadows in the course of a year, he would have discovered that the shadow markers form a line due north-south, and had he made a line perpendicular to that line, he would have defined due east-west, as below (Figures 3.5, 3.6), confirmed by a sighting of the rising sun due east, and the setting sun due west, on the equinoxes.

Now it just so happens that the shortest of all the local noon shadow markers identifies the summer solstice, and the longest of the local noon shadow markers

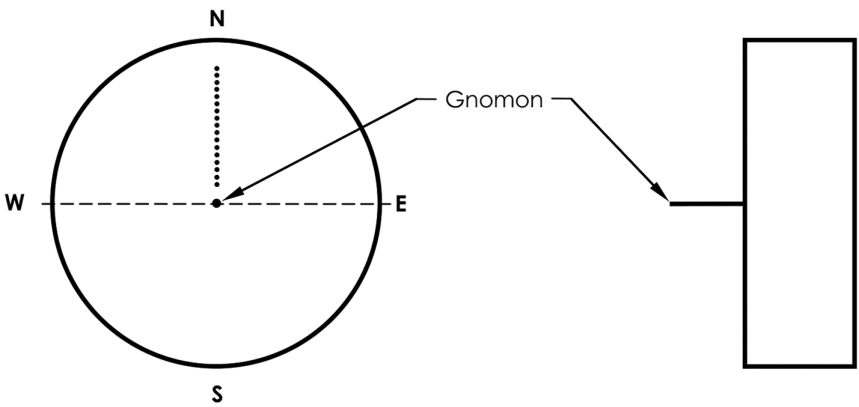

Figure 3.5 Plan view of a possible reconstruction of Anaximander's sundial (left); side view of gnomon (right).

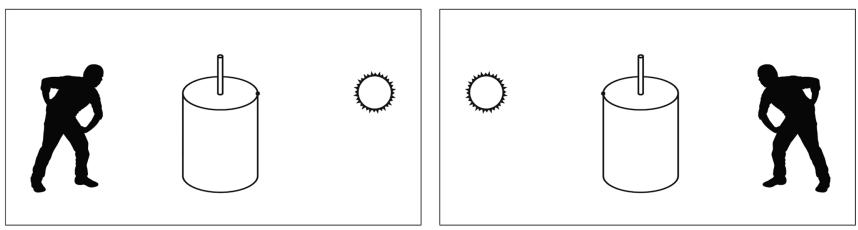

Figure 3.6 [Left] Sighting the rising sun on the winter solstice. [Right] Sighting the setting sun on the winter solstice.

identifies the winter solstice. Also, he would have realized that the shadow marker identifying the vernal or autumnal equinox is *not* equidistant between the summer and winter shadow markers (Figure 3.7).

Now, if we follow this imagery, having identified the shortest and longest local noon shadows, and the shadow marker identifying the equinox, and then made circles on the drum face with the distances being radii of circles from the drum's center where the gnomon would be placed, they might appear as in Figure 3.8.

For those familiar with archaic column-drums from the Samian Heraion, Ephesian Artemision, and Didymaion, the imagery is strikingly suggestive of column-drum *anathyrôsis* and *empolion* (see Hahn 2001, ch. 4; Figure 3.9).

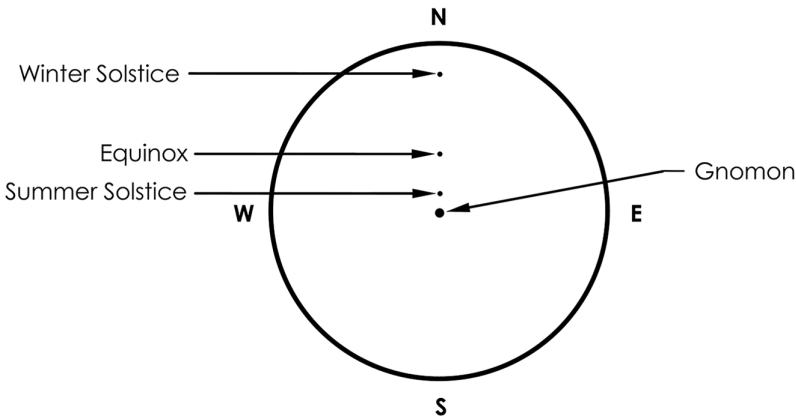

Figure 3.7 Identifying summer and winter solstice, and the equinox, by the local noon shadow marking on the sundial.

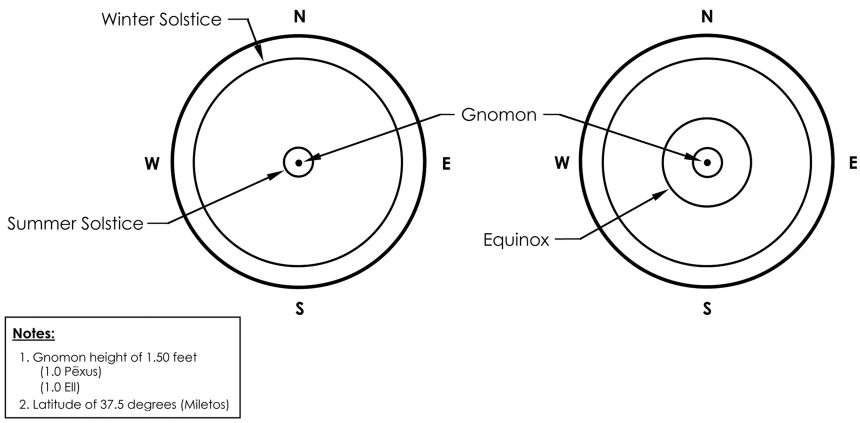

Figure 3.8 Circles made using the radius distance of local noon shadows to gnomon.

It is tempting to imagine that, if this speculation were correct, Anaximander's sundial might still exist somewhere on a column-drum taken from Sparta and re-used in some other building.

These observations lead to interesting reflections: if the column-drum surface was located in an open field so that Anaximander could make a mark at the edge of the drum where he aligned the rising sun and the gnomon, and also the setting sun and gnomon, on the summer solstice, and similarly on the winter solstice, with the rising sun and the setting sun aligned with the gnomon, Anaximander would then be able to confirm two more important points, namely, that while the sun rises due east on the spring equinox, it rises more and more north of east each day until it reaches a point on the summer solstice where it no longer rises any further north of east (Figure 3.10). And on that day, it just so happens, the sun also casts the shortest local noon shadow of the year. And while the sun rises due east on the fall equinox, each day following it continues to rise more and more south of east until it reaches a point on the winter solstice where it no longer rises any further south of east (Figure 3.11). And on that day, it just so happens, the sun casts the longest local noon shadow of the year. The same pattern occurs, in a mirror like fashion, with regard to the sun and the gnomon's shadow as it sets on the equinox due west, and then appears to set further north of west as summer approaches, and further south of west as winter approaches. All these markers are the module's shadow, alterations without change.

Since Aristotle in the *Meteorology* imagines a map made by means of these earthly markings identifying the risings and settings of the sun on the summer and winter solstices, and the equinox, to frame the map of the inhabited earth, the map might also have been made earlier by Anaximander in a similar way. The inhabited earth lying inside the rectangular area, as below (Figure 3.12).

If the observations of the sun's rising on summer and winter equinoxes are connected geometrically by straight lines to the drum's center, by bisecting that

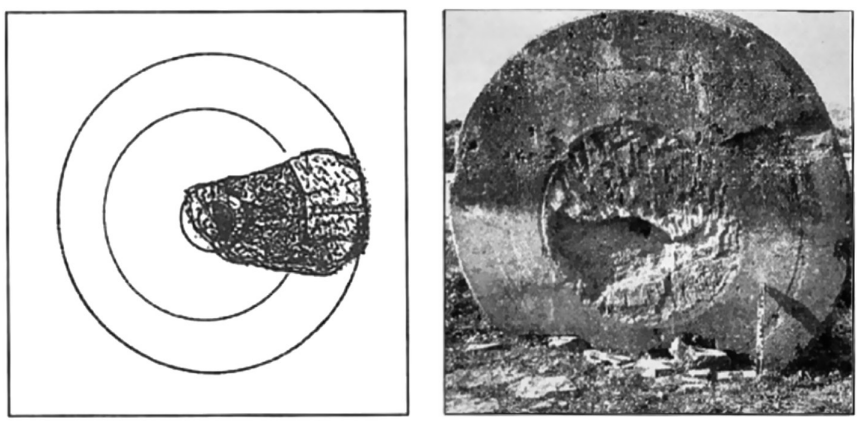

Figure 3.9 [Left] From archaic Temple of Apollo at Didyma *anathyrôsis* with round *empolion.* [Right] From Samos Dipteros II with rectangular *empolion.*

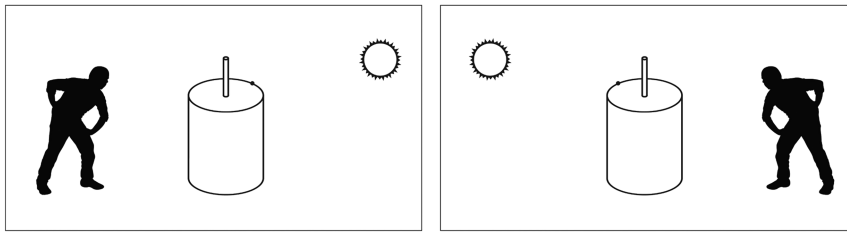

Figure 3.10 [Left] Sighting the rising sun on the summer solstice. [Right] Sighting the setting sun on the summer solstice.

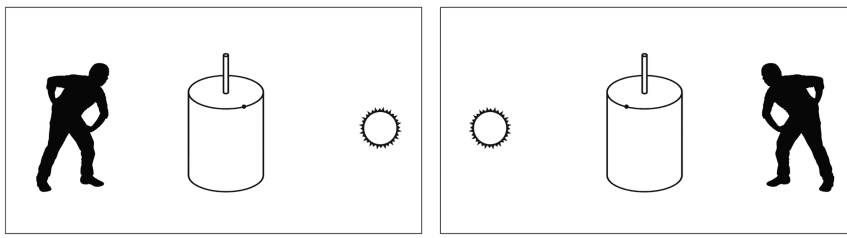

Figure 3.11 [Left] Sighting the rising sun on the winter solstice. [Right] Sighting the setting sun on the winter solstice.

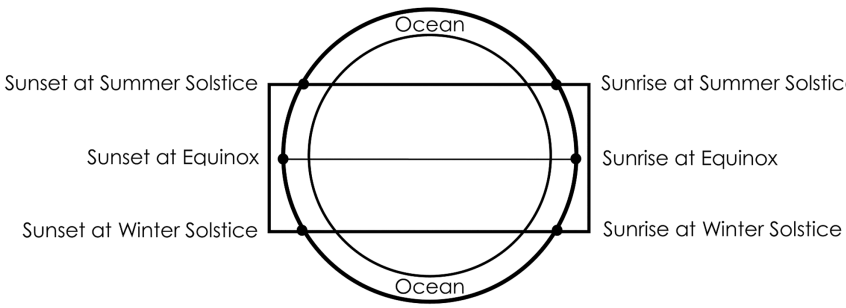

Figure 3.12 Possible reconstruction of Anaximander's frame of the map of the inhabited earth, using markers of rising and setting of the sun on summer and winter solstice, and equinox.

angle, one could identify, or confirm, due east, and in a mirror like way, due west, and so mark the equinox precisely (Figure 3.13).

Conclusions

In summary, by the use of the gnomon both Thales and Anaximander showed they grasped modular thinking. The gnomon presents an underlying module, and

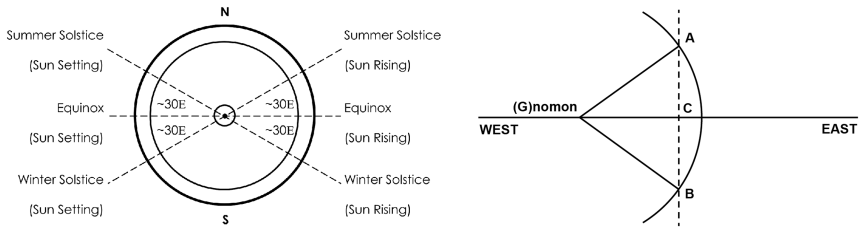

Figure 3.13 Anaximander might have calculated the exact time of the equinox by bisecting the angle formed from sunrise on summer and winter solstices.

with its varying shadows a model, by means of which all the other things—distances, heights, seasons—are measured. There is an underlying unity that alters without changing. By measuring pyramid height when shadow length = pyramid height, Thales relied on a gnomon to show that the time was right, when vertical objects cast a shadow tactilely measurable to their lengths. They could measure with a string or cord, or even a cubit rod, the length of the gnomon's shadow but had to *infer* that the pyramid's shadow was also equal to its own height. The inference illustrated testifies not only to their proportional thinking but also their microcosmic-macrocosmic reasoning. The gnomon and its shadow offered a microcosm, the unity by which other larger objects could be measured; the pyramid was the very same structure scaled-up. By seeing this interpenetrating structure, Thales imagined a ladder to mentally ascend to the top; just as the small world was imagined to interpenetrate the big world, so also did water, *ceteris paribus*, underlie—interpenetrate—all appearances, altering without changing substantially. The gnomon and its shadow presented Anaximander, too, with an underlying module, a model, by means of which the seasons, and perhaps also the hours, were indicated. The shadows cast by a gnomon on a column-drum or circular surface offered a miniature model of the earth itself, imagined in shape to be like a column-drum; the shadows identified the summer and winter solstices, and the equinox, and the sightings of the rising and setting of the sun at these times marked out the boundaries for the map of the inhabited earth.

It has been the purpose of this essay to unfold the theory that allows for the development of their techniques. The technique of using a gnomon to measure the height of a pyramid and to determine the seasonal divides of a solar calendar were enveloped by a metaphysical theory that envisaged an underlying nature or unity that could alter without changing. The theory may be variously called *substance monism* or *modular thinking*. That theory provides the motivation for investigation, to search for the *One under Many*. Common sense suggests that we live in a world of multiplicity and diversity, and yet Aristotle reported that the earliest philosophers supposed, contrary to common sense, that there was an underlying substrate that does not perish even when, qualitatively, it appears different. Scholars following Cherniss, such as Graham (2006), Sassi (2018), and Rossetti (2022) dismissed *substance monism* as historically inappropriate. But the archaic

evidence undermines the objections by Graham and the others on this point, evidence that they never even considered because they focused too narrowly on the doxographical tradition without *situating* the earliest philosophers more broadly in their historical, cultural, and most importantly, technological contexts. Four instances drawn from these contexts support the prevalence of *modular thinking*:

(i) archaic Ionian architects' underlying module of column-diameter in monumental temples in Samos, Ephesus, and Didyma;
(ii) the plausible case that the right triangle is the fundamental geometrical figure out of which the cosmos is built (a story preserved later in Plato's *Timaeus*);
(iii) the abundant circulation of electrum, gold, and then silver coinage whose *statêr* was the basic unit in terms of which all other submultiples established their value;
(iv) the felting of wool shows that the alteration of appearances is the result of a natural principle of compression operating on a persisting substrate.

All this evidence shows that the Ionian Greeks of the sixth century were surrounded by examples of underlying unities that altered without changing, that is, by examples of modular thinking. And now, we can see further, that the gnomon and its shadow supplies yet another example of modular thinking, and thus supports further as *historically appropriate* Aristotle's claim that the earliest philosophers were substance monists.

Notes

1 Serres introduces the idea: "A technique is always an application that envelops a theory" (1982, 84). I regard that there is something profound in this statement, but I modify it to emphasize a different aspect of this point. The technique is an application enveloped by a theory. That is, the use of a technique is an expression of a theoretical framework that gives birth to the technique, and through its application, allows the technique to be refined.
2 All translations are mine.
3 I have given presentations concerning the gnomon, along with other examples of contemporary modular thinking, at the Atelier Clisthène, the University of Pittsburgh colloquia for Classics, Philosophy, and the History of Science, at the conference for Ancient Science at the University of London, and at the International Association of Presocratic Studies in Delphi.
4 Vitruvius III,3,7
5 *apud* Simplicius: Ἀναξιμένες…μίαν μὲν καὶ αὐτὸς τὴν ὑποκειμένην φύσιν καὶ ἄπειρόν φησιν….διααφέρειν δὲ μανότητι καὶ πυκνότητι κατὰ τὰς οὐσίας (*in Phys.* XXIV.26). N.B. Here it is made explicit that, on the authority of Theophrastus, preserved later by Simplicius, that Anaximenes maintained there was a single underlying substrate (ὑποκειμένη) whose appearances were a result of rarefaction and condensation, or simply a reflection of different degrees of compression. This testimony shows that Graham is mistaken when he insists there is no claim in Anaximenes to an underlying substrate.
6 Gregory writes: "The earliest boat designs were essentially a shell of planks with no internal bracing or support. The planks were connected in various ways, from sewing them together to more sophisticated wood joins. It was soon realised though that a

much stronger boat could be made by the addition of frames, pieces of timber fitted across the bottom of the boat, matching the curve of the planks and joined to them. When we see overhead pictures of decayed boats, it is usually the frames which have survived best giving a skeleton or rib cage look to the boat. One Greek term for ship's frames is *pleurai*, "ribs". The space between two frames was effectively a module for the ship designer and constructor. It set the relevant proportions and was replicated along the length of the ship. During construction, the shipwright would score lines on the inner surface of the planking indicating where each frame would go. There are some differences with architecture here, in the sense that the curve of the ship's planking, and its beam would differ between frames, more so on merchant craft which had a broader beam and were constructed for seaworthiness and load carrying, than on warships which were significantly more slender, and built for speed. It is also the case that the spacing of frames was not always entirely regular, though that may be related to other factors such as supposed cargo load or the need to support superstructure. It may also be important that ships were created from wood, which is not uniform, so the best construction might use a strong piece of wood slightly off its theoretical place where that piece of wood might lose too much strength if whittled down too far. Despite those differences, the idea of modularity is still there, with one module of the ship setting the basic proportions and being replicated as far as possible throughout the ship."

7 In a casual discussion, archaeologist-architect Manolis Korres suggested that the module for the Athenian/Periclean Parthenon may have been an element of the moldings of the temple.

8 I owe this insight that I expand upon to Serres 1982.

9 This technique was how Anaximander may well have made his sundial placing a gnomon in the center of a column-drum, or mounted on a stone surface with its radius marking out a circle etched into the stone (cf. Hahn 2010, ch. 6).

10 The preliminary key to this measurement was that Thales knew there were two right angles in every triangle, that the angles of every triangle summed to two right angles, and since the measurement of pyramid height created a vertical axis that was at right angles to its shadow, when the pyramid's shadow = pyramid height, the other two angles of the triangle were each equal to half a right angle. And of course, the angles of the gnomon and its shadow at the same time were the same. This is what it means to say that the triangles were *similar*. We have the testimony of Geminus—preserved in Eutocius' *Commentary on Apollonius' Conica*—that while the Pythagoreans proved there the angles of every triangle summed to two right angles, the geometers who came before them—that could only be Thales and members of his generation—"theorized" how there were two right angles in every species of triangles, equilateral, isosceles, and scalene. For the details of how this plausibly took place, see Hahn 2017b, 11; 169-170.

11 By "today's calendar" I mean 2020. Due to precession of the equinoxes, these solar events would have taken place at different times.

12 The reports are in Diogenes Laertius, Pliny, and Ps.-Plutarch.

13 Diogenes Laertius says he "discovered" (εὗρεν) the gnomon (DK12 A1 = Diog. Laert. II.1–2), though this must be false, but he may certainly have been credited with its introduction into Greece.

14 And we have other contemporaneous examples of modular thinking: the tunnel of Eupalinos on Samos, mid-sixth century, is divided into 50 sections each identified by the Milesian letters of numeration painted along the western wall; the module was ca. 2.04 metres that does not correspond to any foot or ell measurements we have elsewhere in Greece. Eupalinos invented his own tunnel measure, that is, his own module.

15 Moreover, the report that Anaximander advised the Spartans to move into the fields when an earthquake seemed likely (DK12 A5a), makes Anaximander's visit to Sparta all but certain. See also Hahn 2019b for a different take on the context of Anaximander's sundial.

Bibliography

Burkert, Walter. 1972. *Lore and Science in Ancient Pythagoreanism*. Translated by Edwin L. Minar, Jr. Cambridge: Harvard University Press.

Cherniss, Harold. 1935. *Aristotle's Criticism of Presocratic Philosophy*. Baltimore: The Johns Hopkins Press.

Diels, Hermann, and Walter Kranz. 1972. *Die fragmente der Vorsokratiker*, 6th Edition. 3 vols. Dublin: Weidmann.

Graham, Daniel. 2006. *Explaining the Cosmos: The Ionian Tradition of Scientific Philosophy*. Princeton: Princeton University Press.

Gregory, Andrew. Unpublished manuscript. Microsoft Word file. *Material Philosophiae: the Material Dimensions of Greek Philosophy*, Co-Editors William Wians and Robert Hahn, Brill, 2023.

Hahn, Robert. 2001. *Anaximander and the Architects: The Contribution of Egyptian and Greek Architectural Technologies to the Origins of Greek Philosophy*. Albany: SUNY Press.

———. 2003. "Proportions and Numbers in Anaximander and Early Greek Thought." In *Anaximander in Context: New Studies on the Origins of Greek Philosophy*, by Dirk Couprie, Robert Hahn, and Gerard Naddaf, 73–163. Albany: SUNY Press.

———. 2010. *Archaeology and the Origins of Philosophy*. Albany: SUNY Press.

———. 2017a. "Heraclitus, Milesian Monism, and the Felting of Wool." In *Heraklit im Kontext*, edited by Enrico Fantino, Ulrike Muss, Charlotte Schubert, and Kurt Sier, 187–210. Boston: Walter DeGruyter.

———. 2017b. *The Metaphysics of the Pythagorean Theorem: Thales, Pythagoras, Engineering, Diagrams, and the Construction of the Cosmos out of Right Triangles*. Albany: SUNY Press.

———. 2019a. "Did Aristotle get the Origins of Philosophy Wrong?" In *Aristotle 2400 Years: The Proceedings of World Congress 23–28 May 2016*, edited by Demetra Sfendoni-Mentzou, 610–15. Ancient Stageira, Ancient Miez: Aristotle University of Thessaloniki.

———. 2019b. "*Muthos* and *Logos* on New Year's Day: Trial and Error in Anaximander's Seasonal Sundial." In *Logoi and Muthoi: Further Essays in Greek Philosophy and Literature*, edited by William Wians, 95–134. Albany: SUNY Press.

———. forthcoming. "Could Thales have known the Pythagorean Theorem." In *'Knowledge' in Archaic Greece: What Counted as 'Knowledge' both Before and during the Origins of Philosophy in the 6th Century BCE Ionia*, edited by Robert Hahn and Alexander Herda. Center for Hellenic Studies/Harvard University Press.

Hilbert, Rudolf. 2018. *Die Elektronprägung von Milet, Nomismata* 9. Germany: Habelt Verlag.

Rossetti, Livio. 2022. *Thales the Measurer*. London: Routledge.

Sassi, Maria. 2018. *The Beginnings of Philosophy in Greece*. Princeton: Princeton University Press.

Serres, Michel. 1982. "Mathematics and Philosophy: What Thales Saw …." In *Hermes: Literature, Science, Philosophy*, edited by J. V. Harari and D. F. Bell, 84–97. Baltimore: Johns Hopkins University Press.

Vitruvius. *Ten Books on Architecture*. 1999. Translated by Ingrid D. Rowland, Commentary and Illustrations by Thomas Noble Howe. Cambridge: Cambridge University Press.

4 On the Binding of Ares and Aphrodite

The Twofold Meaning of τὸ καλόν in Ancient Greek Philosophy and Poetry*

Lewis Trelawny-Cassity

Introduction

Καλόν is an important if ambiguous word in ancient Greek.[1] Καλόν admits of a wide variety of English translations, including "beautiful," "noble," "admirable," "fair," and "fine," but it is widely agreed, as Nehamas and Kosman both note, that none of these English translations is appropriate for all instances of the Greek word (Nehamas 2007, 98–100; Kosman 2010, 352). The difficulty regarding καλόν is, in my view, not primarily due to the very real obstacles inherent in translating a word from one language into a word in another language across the chasm of more than two thousand years. I believe that the difficulty regarding translation is not our primary difficulty with regards to καλόν because, unlike Kosman, Gadamer, and others,[2] I don't think that there was a unitary "Greek concept" of καλόν that we can grasp or "recover" and then compare and contrast to some contemporary, unitary concept of the beautiful. I don't hold this view because of any particular position coming out of the philosophy of language or translation studies; rather, I hold this view for the much simpler reason that our sources, including Homer, Tyrtaeus, Sappho, Aristophanes, Plato, and Aristotle, show that the ancient Greeks puzzled about and contested with each other over the appropriate meaning of καλόν. In light of this fact, I believe that the proper approach to searching for the meaning of καλόν is to begin with the recognition that our ancient Greek sources highlight the ways in which the meaning of καλόν was a *problem for the classical Greeks themselves.*

Because of the difficulty inherent in the meaning of καλόν, I think that Socrates' question in the *Hippias Major* is a valuable one: "What is this, τὸ καλόν?" (Pl. *Hp. mai.* 287d3). That is, while I do not think that there was a unitary and unambiguous concept of καλόν operative in ancient Greek culture, I believe that the search for such a concept, a search that the Platonic dialogues encourage us to embark

* It is my honor to dedicate this essay to my teacher, advisor, and friend Tony Preus. I am grateful to Tony, Greg Anderson, and Bob Guay for taking the time to comment on earlier drafts of this essay. I am also grateful for the careful and thoughtful editorial comments of D. M. Spitzer.

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on, is philosophically valuable: such a search might well help us to realize how τὸ καλόν is a problem for ourselves as well.

In searching for, that is, trying to define, τὸ καλόν, one enters into the Platonic activity of collection (συναγωγή) and division (διαίρεσις), which is an important part of Platonic dialectic. Such a defining and sorting process seeks to find the one form (εἶδος) that accounts for all the instances in its class. In the *Symposium*, Diotima of Mantineia gives some important advice in the search for definitions: we should be aware that in some cases the meaning of a word, such as, for example, "making" (ποίησις), might come to be dominated by one of its manifold meanings at the expense of its other meanings. For instance, Diotima notes that the word "poets" (ποιηταί) has come to be used only to refer to writers of poetry and thus to unfairly exclude other types of "makers" who could also be called "ποιηταί" (Pl. *Symp.* 205b8–d8). Diotima's reminder is important because both customary practice as well as improper collection and division can lead to illegitimately asserting that there is one meaning of a term whereas there are actually many. Here, in our search for the definitions of words, we seem to have come across a paradigmatic case of the Platonic question of the relationship between "the one" (τὸ ἕν) and "the many" (τὸ πλῆθος).

From a philological perspective, it might be best to emphasize that τὸ καλόν belongs to *the many* and so to record the many different uses of this word by different people in different time periods and contexts; from this perspective, it doesn't make sense to try to ascertain which of these meanings is the *real* one. From this perspective, we should therefore be cautious to avoid reductive definitions that obscure the subject matter that we are seeking to define, and perhaps, rather than seek to define the *true* meaning, we should be content to catalogue and describe the *various* meanings of our term.

While the many-ness of τὸ καλόν is important to keep in mind, I think that the fact τὸ καλόν refers to both the beautiful and the noble is not accidental or due to a mere pun (Kosman 2010, 347).[3] As a starting point, I think it better to approach τὸ καλόν as though it might have a πρὸς ἕν ("towards one" or "focal meaning") meaning of the sort that Aristotle ascribes to τὸ ὄν ("being") in the *Metaphysics* (Arist. *Metaph.* 1003a33–34).[4] From this starting point, I believe that we will be able to eventually see how τὸ καλόν approaches but ultimately falls short of a single meaning and thus why it posed a problem for the ancient Greek authors discussed in this paper.

So far I have been leaving τὸ καλόν untranslated. To broach the various meanings of this term, let us take a look at how Diogenes Laertius presents it in the context of his synopsis of Plato's philosophy. Following an exposition of the related term εὐγένεια ("good birth" or "nobility"), Diogenes writes:

> Τὸ κάλλος has three divisions. The first is the object of praise, as of form fair to see. Another is the serviceable; thus an instrument, a house and the like are καλά for use. Other things again which relate to customs and pursuits and the like are καλά because beneficial. Of κάλλους, then, one kind is matter for praise, another is for use, and another for the benefit it procures.
>
> (Diog. Laert. III.89)

Diogenes' first division of καλόν is the most agreed upon: the καλόν is the *beautiful*, with the beautiful understood as a "good shape perceivable through sight" (ἡ διὰ τῆς ὄψεως εὐμορφία). Here, the prime example of the beautiful is a body beautiful to behold. What strikes me as mistaken about Diogenes' first division is that he writes of the beautiful emphasizing it as "something praised" (ἐπαινετόν), whereas I see beautiful bodies as things which are primarily desired.[5] *Praise* is important with regards to τὸ καλόν, but primarily in the context of nobility. Diogenes' second division is important to consider, but one which I will disagree with. As does Aristotle in the *Topics* (Arist. *Top.* 106a20–22), Diogenes uses the example of a house as something that can be considered καλόν; Diogenes says that a house can be καλόν insofar as it is useful (χρηστικόν). Like the description of a καλόν figwood soup spoon in *Hippias Major* (Pl. *Hp. mai.* 290d–291d), this use of καλόν is somewhat distant from what I consider its main meanings, somewhat like how describing a delicious pizza as "incredible" or "unbelievable" is commonplace and intelligible but also outside the primary meaning of these terms.[6] The examples that Diogenes gives for his third division are important: laws (or customs; νόμοι) and practices (ἐπιτηδεύματα). Laws and practices, when they are good (πρὸς ὠφέλειαν), are noble (καλόν).[7]

While the meanings of τὸ καλόν are "many," I would like to replace Diogenes' threefold division with a twofold one, arguing that the primary question regarding τὸ καλόν is the question of the relationship between the "the one" (τὸ ἕν) and "the two" (ἡ δυάς). As Asmis and Kosman both note, τὸ καλόν has two main senses: "beauty" and "moral goodness" (Asmis 2010, i); "noble character" and "striking good looks" (Kosman 2010, 346). Both senses of τὸ καλόν apply to the human person and are terms of approbation. While τὸ καλόν has a broad range of meanings and uses, this paper will seek to show that the ancient Greeks saw two meanings as exemplary: (1) τὸ καλόν as "the noble," understood as an action or character trait achieving virtue (ἀρετή) and receiving honor (τιμή) and (2) τὸ καλόν as "the beautiful," understood as the characteristic possessed by an overpoweringly erotically attractive person.

In Part I of this paper, I develop seven shared characteristics that link the beautiful and the noble. In Part II, I examine the binding of Ares and Aphrodite in the *Odyssey* in order to explore Homer's presentation of the kinship between the noble and the beautiful as well as the difficulty of uniting them. In Part III, I argue that Sappho holds the "beautiful" aspect of τὸ καλόν to be superior to the "noble," whereas Tyrtaeus sees the "noble" aspect of τὸ καλόν as superior to the "beautiful." In Part IV, drawing on Plato and Alexandre Kojève's reading of Hegel, I survey four different but partially overlapping approaches to understanding the duality of τὸ καλόν. In Part V, I seek to trace the origin of the twofold meaning of τὸ καλόν as the beautiful and the noble to the twofold nature of human desire—the human being both desires and desires to be desired.

Shared Characteristics of the Noble and the Beautiful

In trying to answer the Socratic-Platonic question "what is τὸ καλόν?," we must probe the nature of the noble and the beautiful and attempt to determine whether

they are "one" or "two." The ancient Greeks referred to both the "noble" and the "beautiful" as τὸ καλόν because these two phenomena share much in common, yet their complete oneness proves elusive for reasons that we will investigate. If we stay with the language of the "one" and the "two," we could say that τὸ καλόν partakes of "ἡ ἀόριστος δυάς," "the indeterminate dyad" (see Arist. *Metaph.* M). By this I mean, first, that τὸ καλόν seems to irremediably partake of duality and indeterminacy in a special way, a way related to its essence. Following what I take to be Plato's indications, I at times refer to this duality as "duplicity." My position differs from Gadamer's view, as presented by Tate, "that the idea of the beautiful is a one that transcends its many appearances, but not as a discrete entity" (Tate 2015, 34). That is, the crucial issue to understand is not, as Gadamer suggests, the peculiar difficulties of μέθεξις (participation) and χωρισμός (separation) that τὸ καλόν presents but rather the difficulties within the idea or concept of τὸ καλόν itself. In other words, I am not certain that τὸ καλόν is in fact a *one* within the context of the ancient Greek texts available to us—it is more of a *two*. The number two, of course, does possess a certain type of unity by which we can distinguish it from three and the other numbers.

Before going on to analyze whether the noble and the beautiful are one or two, however, I would like to briefly survey seven features of τὸ καλόν that apply to both the noble and the beautiful:[8] 1) attractiveness; (2) transcendence; 3) duplicity; (4) the incapacitation of calculation; (5) a relationship to mortality, immortality, and remembrance; (6) order; and (7) a connection to the realm of appearance.

(1) attractiveness

One of the most crucial things that beautiful bodies and noble deeds have in common is that they attract us. As Lear writes, "The *kalon* forces itself on our awareness, either through our eyes or on the mind" (2015, 140). And, as Tate notes, "the embodied experience" of τὸ καλόν is "overpowering" (2015, 29). The striking power of beautiful bodies and noble deeds moves and attracts us as though we were drawn by a magnet. Although other things in the cosmos can force themselves on us, such as violence (βία) and necessity (ἀνάγκη), the attractiveness of beautiful bodies and noble deeds is most often experienced by human beings as something that is good and pleasurable. Indeed, in the *Republic* Socrates says that the "the idea of the good (ἡ τοῦ ἀγαθοῦ ἰδέα)...is in fact the cause (αἰτία) of all that is correct (ὀρθῶν) and καλῶν in everything" (Pl. *Resp.* 517b8–c2). The good that the noble and beautiful participate in attracts us to them.

(2) transcendence

While good things of various sorts attract us, things that are καλόν present themselves as items of transcendent value. That is, they cut through the panoply of good things that we perceive and present themselves to us as ultimate values. A truly noble act or the overwhelming beauty of a beloved do not present themselves as fungible, that is, as items that we might exchange for another set

of goods. Rather their manifestation dominates our thoughts and emotions. Such occurrences of τὸ καλόν transcend or cut across our ordinary value-scheme.

(3) duplicity

While I agree with Socrates that the good is somehow present in beautiful bodies and noble actions, I think it is important to note how duplicity, that is, "two-foldedness," is inherent to the phenomena of τὸ καλόν as it is presented in ancient texts, and, I believe, our own experience. While beauty and nobility somehow attract us and partake of the good, aspects of beauty and nobility can repel us and under certain circumstances partake of the bad. To understand this, we need to investigate the contrary and antonym of τὸ καλόν, τὸ αἶσχρον. Just as τὸ καλόν can mean "beautiful" in an aesthetic sense and "noble" in a moral sense, τὸ αἶσχρον can mean "ugly" in an aesthetic sense and "shameful" in a moral sense. If all that were beautiful were also noble and all that was noble was always beautiful, τὸ καλόν would be one, but, as we will see, some actions in pursuit of beauty (τὸ καλόν) are shameful (αἶσχρον), and some noble (καλόν) actions, such as valor in warfare, can lead to physical disfigurement, that is, the creation of an ugly (αἶσχρος) and maimed physique or the creation of a corpse,[9] which is not a thing of beauty for the eyes to gaze upon, no matter what some poets say. It seems that while both beauty and nobility can participate in the good (τὸ ἀγαθόν), this participation is sometimes qualified, and, most importantly, qualified by the alternate meaning of τὸ καλόν.

(4) the incapacitation of calculation

While τὸ καλόν as either beauty or nobility is attractive and partakes in some way of the good (τὸ ἀγαθόν), it differs from other words that can also be said to participate in the good, such as the profitable (τὸ κερδαλέον), the gainful (τὸ λυσιτελοῦν), or the advantageous (τὸ συμφέρον). The difference here is that while, for example, profit (κέρδος) is strictly and entirely a matter for calculation (λογισμός), τὸ καλόν is not. In his lectures on the *Symposium*, Leo Strauss identifies "a certain contradiction between calculation and eros" (2001, 61). I believe that this contradiction also applies to the object of eros—τὸ καλόν (Barney 2010, 363). Beautiful people often bedazzle those in love with them, making them breathless and unable to think clearly about what is truly good for themselves. Similarly, noble deeds of self-sacrifice take place outside of the economy of cost-benefit analysis, and part of their nobility is that these actions disregard self-interested calculation. It seems that both the noble and the beautiful force reason to pause, and this may be one reason for our difficulty in deciding whether these two aspects of τὸ καλόν, the noble and the beautiful, are one or two: it may be that it is the nature of τὸ καλόν to somehow be resistant to rational analysis.

This shared characteristic of the noble and the beautiful is what keeps me from agreeing with Diogenes Laertius that the useful or serviceable (χρηστικόν) is a primary meaning of τὸ καλόν or that figwood spoons can truly be exemplars of

τὸ καλόν. While at one point Barney explicates figwood spoons as being καλόν due to their functionality, I believe that her point that καλόν is "used for what has positive value *without* reference to any envisaged effects" to be more apropos (2010, 365, 369). Like Jaeger (1945, 416 n. 4), I see τὸ καλόν as expressing an entirely different psychological orientation than τὸ συμφέρον: it stands outside of any utilitarian appraisal of value.

(5) a relationship to mortality, immortality, and remembrance

In Diotima's speech in the *Symposium*, she notes that "the mortal nature seeks so far as possible to be forever and immortal (ἀθάνατος)" (Pl. *Symp.* 207c9–d2; trans. Benardete 1993, 38; my interpolation). One way of achieving this is through "generation" or "begetting" (γενέσει; 207d3), another way is "setting up immortal fame for eternity" (208c5–6) and gaining "immortal virtue and a famous reputation" (208d7–8). The point is not that our desire for τὸ καλόν, whether in the form of beautiful bodies or noble deeds, is a conscious desire for immortality, because *experientially* τὸ καλόν appears to us as the end of our desire itself (Arist. *Eth. Nic.* 1115b12–13). Rather the claim is that a desire for immortality somehow subconsciously underlies our desire for noble deeds or beautiful actions. Diotima's speech points to how people partially live on in their progeny and in the memories of their communities. While Fustel de Coulanges' theories in *La cité antique* (1864) have undergone substantial criticism, I think that the phenomenon of ancestor worship to which he directs our attention shows that recognition and remembrance can be provided by the family as well as by the city after an individual's death.

(6) order

It is often noted that order, measure, and proportion are key components of τὸ καλόν.[10] In *Metaphysics* M, Aristotle gives evidence for this view, writing that "the greatest forms of τοῦ καλοῦ are order, symmetry, and definiteness" (Arist. *Metaph.* 1078a36–1078b1). While I agree that instances of τὸ καλόν do have order, measure, and symmetry, I believe that defining τὸ καλόν by means of order alone is problematic. True, noble deeds help maintain and preserve order in the city, and beautiful buildings and human bodies are characterized by order and symmetry. But while order plays some role in the phenomenon of τὸ καλόν, both the noble and the beautiful can be destabilizing as well, due to the incapacitating effect of τὸ καλόν on calculation, noted above in (4). As with *eros*, beauty and especially the pursuit of beauty can be socially destructive. Noble actions don't always coincide with prudent actions, and the competitive ethos that strives for noble deeds can lead to disordered conflict just as it can lead to the protection of the order of the polis.

(7) a connection to the realm of appearance

Drawing on Heidegger, Gadamer, and Sallis, Tate emphasizes the "appearance" nature of the beautiful; not appearance in the manner of "mere appearance,"

but rather of a phenomenal ἀλήθεια (2015, 30–31). This aspect of τὸ καλόν is articulated by Lear as well:

> Whereas for us an appearance is, above all, a mere surface appearance, for the Greeks an appearance is, in the first instance, the manifestation or presence to immediate awareness of the thing's being. Thus, whereas our beauty is superficial, sensible, and possibly deceitful, the Greek *kalon* reveals a thing's goodness and is not limited to the sensible surface of things.
>
> (2010, 358)

This linkage to the realm of appearance goes along with τὸ καλόν's striking and attractive aspect (1) as well as its incapacitation of calculation (4) and transcendence (2). A problem emerges however: if τὸ καλόν blots out everything else within an individual's horizon, including rational thought, can it truly be aletheic? While I acknowledge the real, striking, and radiant aspects of τὸ καλόν, I also want to acknowledge that the duplicity of τὸ καλόν allows it to show up as it is not: for instance beautiful things can seem noble when they are not, and noble things can appear beautiful when they are not.[11] Furthermore, the Platonic dialogues often gain their philosophic force by suggesting that we may be ignorant of what true beauty or nobility consists of. While I believe that τὸ καλόν can be a site of ἀλήθεια, the coming to presence of the real, it is important to realize that one's experience of τὸ καλόν can also belong to δόξα (opinion), as is noted in the Athenian Stranger's question: "What shall we say is the reason for our wavering? Shall we say that the καλὰ things are not the same for all of us? Or that they are the same but don't seem to be the same?" (Pl. *Leg.* 655c3–5).[12]

The Binding of Ares and Aphrodite in the *Odyssey*

While all of the Greek gods are καλόν (Pl. *Hp. Mai.* 289a8–b2; *Symp.* 202c6–9), Aphrodite, the goddess of beauty and sex, and Ares, god of war, seem to be exemplary with regard to τὸ καλόν.[13] Aphrodite was selected by Paris as the most beautiful of all the goddesses, angering Athena and Hera; Ares' arena, the battlefield, is where nobility shines out through the warrior's willingness to risk death for heroism and glory.

In Book VIII of the *Odyssey*, Demodokos sings of the love (φιλότητος) of Ares and Aphrodite and the bonds (δεσμός) that Hephaistos, Aphrodite's husband, used to bind them together to shame them. After Hephaistos' machinations ensnare Ares and Aphrodite, he declares that Aphrodite "loves ruinous Ares because he is handsome (καλός), and goes sound on his feet," while Aphrodite "is beautiful (καλή) indeed, but she is intemperate" (Hom. *Od.* VIII.309–10, 320; trans. Lattimore 2007, 206; my interpolations).[14] Here, Hephaistos verbally links together the καλός aspect of Ares with the καλή aspect of Aphrodite, even as he uses his mastery of craft (τέχνη) to fasten Ares and Aphrodite with unbreakable bonds.

Aphrodite and Ares are naturally attracted to each other, despite the fact that Aphrodite is married to Hephaistos, and their sexual attraction to one another illuminates an important aspect of τὸ καλόν—the beautiful and noble are *attractive*. That is, τὸ καλόν exerts a pull on the soul of the subject that perceives it. Hephaistos attempts to punish the adultery of Ares and Aphrodite by shaming them, by making them laughable (ἔργα γελαστὰ; γέλως, 8.307, 326, respectively). While the attraction between Ares and Aphrodite points to some similarity between the noble and the beautiful, the ridiculous sight of their naked, bound bodies points to the duality of τὸ καλόν: something can beautiful (κάλος) and yet shameful (αἰσχρός), and, likewise, something can be noble (κάλος) and yet ugly (αἰσχρός). At first the gods ridicule Ares and Aphrodite, saying to one another, "No virtue in bad dealings" (οὐκ ἀρετᾷ κακὰ ἔργα) (8.329), but this moralistic view is undermined by a question that Apollo puts to Hermes:

> "Hermes, son of Zeus, guide and giver of good things, tell me,
> would you, caught tight in these strong fastenings, be willing
> to sleep in bed by the side of Aphrodite the golden?"
> Then in turn the courier Argeïphontes answered:
> "Lord who strike from afar, Apollo, I wish it could only
> be, and there could be thrice this number of endless fastenings
> and still I would sleep by the side of Aphrodite the golden."
>
> (8.335-42; trans. Lattimore 2007, 129–130)

While Nietzsche and A. W. H. Adkins seem to suggest that Homeric heroes had a unified sense of beauty, moral goodness, and social status that all went under the term τὸ καλόν, the song of the love and binding of Ares and Aphrodite that Demodokos sings shows the conflict as well as the interrelationship between the noble and the beautiful. Adultery is described as κακός (bad, evil, ill), and ridiculously embarrassing when exposed, as well as lacking in virtue (ἀρετή). But while Hermes' response to Apollo's query provokes more laughter from the gods, it points to the possibility that the beauty of Aphrodite is a greater good than the embarrassment that comes from Hephaistos' public and ignoble shaming of these two lovers. That is, it could be better to embrace the καλή Aphrodite and live in shame than be καλόν and respect the rules of matrimony among the gods.

We should also note that while Ares and Aphrodite are erotically attracted to each other, make love, and are bound together for a while by Hephaistos' unbreakable chains, they are released and then separate from one another. Does this perhaps suggest that the union of Ares and Aphrodite, and thus the aspects of τὸ καλόν that they embody, is impermanent or unstable?

Readers so far might think that I have found too much meaning in a myth, or they might think that Ares and Aphrodite are καλόν in the same way, namely with respect to their physical beauty. To come to a clearer understanding of the twofold nature of τὸ καλόν, let us turn to Tyrtaeus and Sappho and who, respectively, assert the superiority of τὸ καλόν as nobility and Ares or as beauty and Aphrodite.

The Contest over τὸ καλόν in Tyrtaeus and Sappho

According to Plato, Tyrtaeus was born in Athens (*Leg.* 629a), but his fame stems from elegiac poetry written to exhort the Spartans to valor in battle during the Messenian War. In his poems, Tyrtaeus notes the pull of τὸ καλόν as the beautiful, but he exhorts young men to a higher form of τὸ καλόν that can be attained by fighting for one's city. Tyrtaeus writes: "It is noble (καλόν) for a good man to die when he has fallen among the front ranks / while fighting for his fatherland (πατρίδι)" (Tyrtaeus 10.1–2).[15] Here a man (ἀνήρ) attains what is "noble" (καλόν) by *dying* for his community. It is not just the man's military prowess but specifically his death that Tyrtaeus emphasizes as most important throughout his surviving fragments.

While Tyrtaeus exhorts young men to risk death in battle on behalf of their communities, he acknowledges the pull of τὸ καλόν understood as the beautiful. Immediately after a discussion of the shame of seeing the stripped and bloodied naked corpse of an old man killed in battle (10.21–27), Tyrtaeus continues:

> But for the young everything is seemly
> so long as he has the lovely bloom of young manhood;
> while alive, men marvel at the sight of him and women feel desire (ἐρατὸς),
> and when he has fallen among the front ranks, he is noble (καλὸς).
>
> (10.27–30)

The phenomenon of τὸ καλόν here is situated by Tyrtaeus in a nexus of erotic desire, death, admiration, and youth. Women feel sexual desire for the blooming body of the young man, but Tyrtaeus seeks to encourage the youth to move past the sexual and erotic sense of τὸ καλόν to embrace nobility in a valiant death. Tyrtaeus' account privileges Ares at the expense of Aphrodite, and he suggests that the youth should seek a "beautiful death" rather than the satisfaction of engaging with beautiful bodies. Here we see that Tyrtaeus makes a case for the transcendence of the noble over the beautiful.

Why should a young man heed Tyrtaeus' call to a "beautiful death"? In a fragment preserved by Stobaeus, we learn that in exchange for dying for the city, Tyrtaeus promises the poet's praise to slain heroes. Virtue (ἀρετή), according to Tyrtaeus, is the greatest human prize, and it is the noblest (κάλλιστον) prize for a young man to win (Tyrtaeus 12.13–14). While virtue is perhaps the greatest prize, it is either awarded by, or at least made known by, the poet. Tyrtaeus writes:

> Never do his name and good fame (κλέος) perish,
> but even though he is beneath the earth he is immortal (ἀθάνατος),
> whoever it is that furious Ares slays as he displays his prowess by standing fast and fighting for land and children.
>
> (12.31–34)

Tyrtaeus' poetry makes clear that he exhorts young men to embrace a noble death, as this is the most noble (κάλλιστον) choice he could make, one far superior to that found in the beautiful and erotic bodies of the women who desire such a young and attractive man.

While Tyrtaeus' privileging of the Ares aspect of τὸ καλόν over the Aphrodite aspect of τὸ καλόν is evident, the grounds of that choice are unclear. What makes a beautiful death more beautiful than the satisfaction of sexual desire found in a beautiful body? Three terms seem to be central to Tyrtaeus' argument: κλέος, ἀθάνατος, ἀρετή: fame, immortality, and virtue (or what we today might call morality). Against the relatively brief duration of sexual fulfillment, Tyrtaeus offers permanence—immortality, though, we must quickly add, immortality without the subjective awareness of that permanence.[16] The immortality offered by Tyrtaeus is therefore a social rather than personal one, an immortality that persists in the eyes of others through κλέος, fame. The fame, the immortal reputation, that one attains is furthermore for ἀρετή, virtue or moral goodness. The result of Tyrtaeus' exhortation, then, is for the young man to come to see social recognition for virtue as a higher type of τὸ καλόν than the καλόν available through erotic encounters, and the superiority of this Ares-type of τὸ καλόν is due to its enduringness, social recognition, and moral worth.

While Tyrtaeus is an exemplar of poetry inspired by or in the service of Ares, the Lesbian poet Sappho is a devotee and friend of Aphrodite, and her poetry acknowledges the καλόν aspect of warfare while denying its claim to supremacy. In Fragment 16, the surviving text of Sappho reads:

> Some men say an army of horse and some men say an army on foot
> and some men say an army of ships is the most beautiful thing (κάλλιστον)
> on the black earth. But I say it is
> what you love (ἔραται).
>
> (Sappho 16.1–4; trans. Carson 2002, 27; my interpolations)

Here, Sappho is aware that men like Tyrtaeus claim that the machinery of war is what is κάλλιστον, but she voices her individual opinion (ἔγω) that it is up to one's individual ἔρως. We could say that while Tyrtaeus tries to steer *eros* towards a particular type of τὸ καλόν, Sappho emphasizes *eros*'s own bent, and she suggests that *eros* itself, not the polis or its poet, is the true guide to what is most beautiful (κάλλιστον).

While Tyrtaeus and others might think that Ares' version of τὸ καλόν is the most powerful, Sappho reminds us that Helen's beauty (κάλλος) overcame everyone (Sappho 16.6–7), a point made also by Plato's Agathon in the *Symposium* (Pl. *Symp.* 196c–e). With regards to "strength," it is by no means clear that Ares is more powerful than Aphrodite, as Agathon and Sappho do well to remind us. Sappho then writes:

> I would rather see her lovely (ἔρατόν) step
> and the motion of light on her face

> than chariots of Lydians or ranks
> of footsoldiers in arms.
>
> (Sappho 16.17–20; trans. Carson 2002, 29; my interpolation)

The virtue of military men *is* attractive and commanding of a certain respect, but can it be ever as beautiful as a lover's step or the light upon her face? While both Tyrtaeus and Sappho recognize each other's version of τὸ καλόν, they present the case for the supremacy of their own view of τὸ καλόν, claiming that either nobility in battle or a lover's beauty is what is κάλλιστον. While trying to avoid defining τὸ καλόν in such a way as to prematurely favor Sappho or Tyrtaeus, it seems that by the standard of attractiveness and power, Sappho makes a powerful case for beauty being superior to prestige. Tyrtaeus might respond that orgasms are brief while fame is forever, but we should note that the poet Sappho has immortalized her desire *and* her individual lovers by name, unlike Tyrtaeus, who, so far as we know, wrote no memorial for specific individuals who died in battle, despite what appears to be his promise to do so in the lines preserved by Stobaeus.

Four Approaches to the Duality of τὸ καλόν

So far, I have tried to broach the question of the unity and duality of τὸ καλόν by reference to the binding of Ares and Aphrodite in the *Odyssey*, and I attempted to raise the question of the competing claims for which meaning of τὸ καλόν is higher, the noble or the beautiful, by briefly surveying some selections from the poetry of Sappho and Tyrtaeus. Now, drawing on Plato and Alexandre Kojève, I survey four different but partially overlapping approaches to understanding the duality of τὸ καλόν:

a) nature (φύσις) and convention (νόμος);
b) "animal desire" and "human desire";
c) lover (ἐραστής), beloved (ἐρώμενος), and φιλεραστία (love of lovers);
d) soul (ψυχή) and body (σῶμα).

a. τὸ καλόν as differently constituted by convention (νόμος) and nature (φύσις)

Fifth century BCE Greek sophists such as Antiphon are often credited with distinguishing between things that are due to nature (φύσις) and things that are due to convention or law (νόμος). This distinction drawn by the sophists is articulated by Plato's Athenian Stranger in Book X of the *Laws*:

> The gods, blessed one, are what these people first assert to exist by art (τέχνῃ)—not by nature (φύσει) but by certain legal conventions (νόμοις), and these differ from one place to another, depending on how each group agreed among themselves when they laid down their laws. And in particular

> they claim that the noble/beautiful things (τά . . καλὰ) by nature (φύσει) are different from those by convention (νόμῳ), and that the just things (τὰ δίκαια) are not at all by nature, but that men are continually disputing with one another and are always changing these things, and whatever changes they've made at a given time are each at that time authoritative, having come into being by art and by the legal conventions, but not, surely, by any nature. (*Leg.* 889e3–890a2; slightly revised, my interpolations)

The sophistic position as articulated by the Athenian Stranger divides the genus τά καλά into two subgroups: τά καλά φύσει (by nature) and τά καλά νόμῳ (by convention). In classical Greek thought *nature* was a term of distinction, so the naturally καλόν things would generally be thought superior to the conventionally καλόν things. Thus, in the *Laws*, the Athenian's interlocutor, Kleinias, urges the Athenian to show that "the law" (νόμος) and "art" (τέχνη) are by nature or by something not inferior nature (10.890d1–8). The Athenian's mention of "the just things" shows that the sophistic position's privileging of nature was seen as undermining law, justice, and morality.

Here, we see that τὰ καλά νόμῳ can be interpreted as "the noble things according to law and convention," whereas τά καλὰ φύσει can be read as "the erotically beautiful things by nature." This interpretation of the sophistic position is supported by Aristophanes' *Clouds*: there the "Better Argument" warns that the "Worse Argument" "will talk you into believing that whatever is foul (τὸ αἰσχρόν) is fair (καλόν) and whatever is fair (τὸ καλόν) is foul (αἰσχρόν) (Ar. *Nub.* 1019–1021). That the Worse Argument sees natural sexual pleasures as superior to socially-constructed nobility is borne out in what follows (*Nub.* 1068ff).

While the term τὸ καλόν admits of multiple meanings, including "beautiful," "noble," "admirable," fair," and "fine," the *Laws* and the *Clouds* follow the cleavage in τὸ καλόν that we described in the introduction: this term primarily means either "the noble," understood as an action or character trait achieving virtue (ἀρετή) and receiving honor (τιμή), or "the beautiful," understood as the characteristic possessed by an overpoweringly erotically attractive person. What we see now is that some ancient Greeks viewed the former sense of τὸ καλόν as due to convention (τά καλὰ νόμῳ) and the latter as due to nature (τά καλὰ φύσει).

While the Athenian Stranger articulates the nature-convention distinction as due to the corrupting influence of the sophists, in the *Gorgias* Callicles accuses Socrates of exploiting the twofold nature of τὸ καλόν in a sophistic manner:

> Although you claim to be pursuing the truth, you're in fact bringing the discussion around to the sort of crowd-pleasing vulgarities that are admirable (καλά) only by law and not by nature (ἃ φύσει μὲν οὐκ ἔστιν καλά, νόμῳ δέ). And these, nature and law, *are for the most part opposed to each other*, so if a person is ashamed and doesn't dare to say what he thinks, he's forced to contradict himself. This is in fact the clever trick you've thought of, with which you work mischief in your discussions: if a person makes a statement in

> terms of law, you slyly question him in terms of nature; if he makes it in terms of nature, you question him in terms of law. That's just what happened here, on the question of doing what's unjust versus suffering it. While Polus meant that doing it is more shameful by law, you pursued the argument as though he meant by nature. For by nature all that is worse is also more shameful (αἴσχιόν), like suffering what's unjust, whereas by law doing it is more shameful.
>
> (Pl. *Grg.* 482c4–483a8; my emphasis and interpolations)[17]

Callicles' critique of Socrates' sophistic use of the ambiguity of τὸ αἰσχρόν and τὸ καλόν is revealing, and Callicles clearly attempts to describe the superiority of τά καλὰ φύσει to τά καλὰ νόμῳ.

While Callicles offers us a clear standard by which to judge the merits of the two types of τά καλά, his own desires point to a problem with his standard. Callicles attempts to argue for the natural as opposed to the conventional good, but his appeal to "the law of nature" (νόμον γε τὸν τῆς φύσεως, Pl. *Grg.* 483e2–3), his oaths "by Zeus" (e.g., 511b–c) and, above all, his desire for social recognition through political rule, show that his thinking is not as clear and free from conflict as he claims it to be. Callicles' problem is that he forgets, unlike Socrates' student Strepsiades, that "Zeus is not" (Ar. *Nub.* 826–827) and, in his pursuit of political rule, he seeks a good that is constituted by convention.

Callicles' search for social recognition could only be consistent with his standard of "nature" if "the human is by nature a political animal" (Arist. *Pol.* 1253a.2–3). While this naturalization of politics is attempted by Aristotle in Book I of the *Politics* and the Athenian Stranger in Book X of the *Laws*, it is not Callicles' perspective, for as we have seen, he says that law and nature are for the most part "opposed to one another."

Within the framework of a contest between Sappho and Tyrtaeus on what is most κάλλιστον, it might seem at first that one could apply the standard of τά καλὰ φύσει and τά καλὰ νόμῳ. At least from the perspective of the "Worse Argument," the natural pleasures of sex are certainly more desirable than dying a violent death for one's community. Such a viewpoint is not applicable to Sappho's position for two reasons. First, Sappho is aware of the sphere of military nobility, but she believes that the beauty of a lover transcends this sphere in all respects; here we see that Sappho sees her lover's beauty as not only "better" than Tyrtaeus' nobility but also "higher." Second, the poetry of Sappho often invokes the goddess Aphrodite, and her view of the beautiful is connected in some way with divinity and the holy, unlike the base view of the "Worse Argument" of the *Clouds.* In order to develop the argument for the superiority of τά καλὰ νόμῳ, we will to turn to a brief examination of some parts of Kojève's *Introduction to the Reading of Hegel*.

b. τὸ καλόν as analyzed by the distinction between "animal desire" and "human desire"

The sophistic distinction between τά καλὰ by nature (φύσει) and τά καλὰ by convention (νόμῳ) was so powerful that, as we noted, it led Kleinias to ask the

Athenian Stranger to attempt to demonstrate that law is natural or is derived from something just as good as nature. Here we see how, from a certain perspective, conventionalism undermines the moral worth of nobility in a way that doesn't seem applicable to beauty. The fact that nobility is "socially constructed" and therefore variable seems to lessen its worth. While the sophistic distinction between "nature" and "convention" privileges nature, other accounts, such as that found in Kojève's reading of Hegel, privilege socially constituted values over "natural" or "animal" desire. Such a perspective will, I hope, shed some light on the views of τὸ καλόν found in Tyrtaeus.

In Kojève's *Introduction to the Reading of Hegel*, we get an account of desire that I would like to adapt to further explore the meaning of τὸ καλόν. In contrast to the animalistic "I" of desire that only negates things and is itself just "thingish" and operative at the level of Sentiment of Self, Kojève posits that human desire is "Desire directed towards another Desire, taken as Desire" (1969, 4–6). On Kojève's account first-order desire, or animal desire, is desire for a thingish object: food or a body to have sex are paradigmatic examples. Second-order desire, or human desire, is either a) desire for desire, or, b) desire for something because it is desired by others. This second-order desire is inherently *social*. Unlike the sophists mentioned in *Laws* 10, Kojève privileges social desire over natural desire. What is the basis or bases for this privileging? At least on first glance, desiring something just because others desire it seems better characterized by Hobbes' "vainglory" or Thorstein Veblen's "conspicuous consumption" than by any particularly valuable human trait.

Indeed, at a basic level, the desire of desire manifests itself as a desire for fame, glory, and status (τιμή, κλέος, κῦδος, δόξα). This ambition (φιλοτιμία, φιλονεικία, φιλονικία) is shown by Plato to be problematic in characters like Polus, Callicles, Theages, and many others. Indeed, in Kojève's version of Hegel's anthropology, the desire for desire leads to a fight for recognition (*Anerkennung*) that is the origin of human slavery. Here, we see that in addition to being a merely conventional good, τιμή is morally problematic.

From another perspective, however, second-order desire is valuable for Kojève because it is motived by the desire for validation of one's subjective view. That is, one has a sense of self-worth, but one needs to validate, verify, and certify it; this can only be done in conjunction with other human beings. Second-order desire, then, can be seen as the desire to validate one's subjective view and transform it into an objective view. It remains to be seen if socially achieved recognition is capable of this task. On Kojève's account, self-satisfaction can only be verified by universal recognition (1969, 79).

The distinction between "animal desire" and "human desire" is ultimately untenable in my view because it creates a chasm between the human and the animal; we would do better to speak of "the human animal" and "the non-human animal." However that may be, Kojève's account does point to something important. Following Hegel's distinction between Sentiment of Self and Self-Consciousness,[18] Kojève privileges the latter over the former as "truly" human. In the Master-Slave dialectic, the Master seeks to gain honor (τιμή or *Anerkennung*) from the human that he enslaves.

What the Master shows here is that he is willing to risk his life for a value, a value that transcends the value he places on his own life. This risk for the sake of a value raises him out of the merely animal realm into the human realm. To risk one's life for a value is καλόν and in fact an action undertaken for the sake of τὸ καλόν. The Hegelian "Fight to the Death for Pure Prestige," on which Kojève lays so much weight in his interpretation of Hegel, emphasizes human autonomy, and the attempt to gain access to objective, intersubjective, and universal principles (1969, 11). To face death is, on this account, to stand for something higher than mere life, and this constitutes the nobility of the human. While Tyrtaeus' emphasis on the importance of the young man's *dying* for his community seemed perverse, on the Kojèvean account of Hegel it is only by being willing to die that one shows that one values something more than one's own existence. This opportunity for risk is not possible in the erotic sphere, which Kojève claims led Hegel from a romantic dialectic of love to the social and political dialectic of the *Phenomenology* (242–245).

c) lover (ἐραστής), beloved (ἐρώμενος), and φιλεραστία (love of lovers)

However may be the case with Kojève and Hegel, it might appear that we have strayed too far from our analysis of τὸ καλόν in a handful of classical texts. It seems to me, however, that Kojève's account of "desire" and "desire of desire" is mirrored in, or, better, a mirror of reflections on desire and τὸ καλόν found in Plato's *Symposium.*

The speakers in Plato's *Symposium* discuss pederasty, the sexual desire of older men for younger boys, in terms of the roles of ἐραστής (lover) and ἐρώμενος (beloved). In general, the lover is attracted to the youth's beauty, and the youth is supposed to gain education from the lover. While it was common and acceptable for an older male to profess erotic desire for a younger male, Athenian traditions around pederasty stigmatized males desiring to be sexually penetrated by other males. That is, it was fine to want to be the lover of young boys, but it was inappropriate to want to be the beloved, especially if one is an adult male.

What makes this interesting for our discussion of τὸ καλόν is that honor-seeking adult males wish to be the beloved of the poet, the city, and other adult males, even if they don't desire sexual penetration. The convoluted relationship of Athenian politicians and the Athenian *demos* was often described in erotic terms (see Scholtz 2007).

If we think of the ἐραστής as one who desires the καλόν body of the young male, his desire operates only at the first-order level of Kojève's animal desire. If the beloved is not playing the role of a mere lifeless sex object and he actually desires the desire of his lover, he would be operating at the anthropogenetic level of desire.

In the *Symposium*, the term φιλεραστία, "love of lovers" is applied to both Socrates and Alcibiades (Pl. *Symp.* 213d6, 222b3–4), and it seems congruent in some way to the Hegelian *Anerkennung* that Kojève finds in the dialectic of Master and Slave.

Socrates, in the *Gorgias*, compares himself to Callicles, noting that they each have a twofold *eros.* Socrates says: "Each of the two of us is a lover of two objects, I of Alcibiades, Clinias' son, and of philosophy, and you of the *demos* of Athens, and the Demos who's the son of Pyrilampes" (*Grg.* 481d). Here, Socrates presents himself as a lover, ἐραστής, of Alcibiades. In the *Symposium*, however, Alcibiades says that Socrates only presents himself as a lover to con young boys into falling in love with him (*Symp.* 222b3–4). Alcibiades accuses Socrates of plotting to be the beloved rather than the lover, and Socrates speaks of Alcibiades' φιλεραστία, his "love of lovers."

While a clear distinction between a sexually desiring older ἐραστής and a passive, non-desiring ἐρώμενος protects patriarchal ideas about masculinity, the *Symposium* shows that relationships of desire are more complicated: lovers are attracted to τὸ καλόν in the form of beautiful, young male bodies, but grown men like Alcibiades and Socrates desire also to have others attracted to them—they desire to be the ἐρώμενος—the object of desire, a desire we could call φιλεραστία: love of lovers.

In the case of men like Callicles and Alcibiades, their φιλεραστία is the desire to be the beloved of the *Demos*—they seek the Demos' affection and desire. Such a desire for public, social, and political recognition is a desire for honor, φιλότιμια. In my view, φιλεραστία, φιλότιμια, and the desire for *Anerkennung* are almost synonymous terms. All are a desire to be thought καλόν. As Kojève puts it, "the lover wants to be *loved*, that is, recognized as absolute or *universal* value in his very *particularity,* which distinguishes him from all others" (1969, 244).

In this subsection, I have endeavored to show that both sides of τὸ καλόν, the noble and the beautiful, show up in the lover-beloved relationship, and that the φιλεραστία of Alcibiades and Socrates has a close kinship with the second-order, anthropogenetic desire of Kojève. It seems to me that human desire is both a desire for the beautiful-noble and the desire to be thought beautiful-noble by others.

d) soul (ψυχή) and body (σῶμα)

A fourth way to think about the bifurcation of τὸ καλόν into the noble and the beautiful is to associate nobility with the soul and beauty with the body. One plausible, though reductive, way to approach Plato's thought is to see his dialogues as encouraging us to focus on the beauty that is manifest in souls rather than bodies. While this approach to body and soul might seem to map on to a focus on appearance versus reality, Nehamas reminds us that both psychic beauty and bodily beauty show up in the same world: both are manifest "in how they—literally—look to us" (2007, 107–108). The relationship between soul and body and τὸ καλόν requires more analysis than I can provide here. The reason why I give it short shrift here is that I believe that sexual desire for bodies always has a psychic component, so that examples of erotic desire for *bodily* beauty are always implicitly psychological.

Conclusion

In this paper, I feel most confident about my specification of the two primary senses of τὸ καλόν, the noble and the beautiful, my enumeration of their shared characteristics, and my presentation of four possible ways that one can approach the twofold nature of τὸ καλόν. The problem remains of settling the dispute between Sappho and Tyrtaeus about whether the noble or the beautiful is κάλλιστον or, alternatively, whether there is some way to specify τὸ καλόν in such a manner as to encapsulate both perspectives, an option I am skeptical of.

In the *Topics*, Aristotle says that τὸ καλόν is an equivocal term (ὁμώνυμον) because it has different contraries:

> Similarly also the contrary of 'beautiful' applied to a living creature is 'ugly,' but applied to a house, 'mean'; so that 'beautiful' is an equivocal term.
>
> (Arist. *Top.* 106a21–23; trans. Forster 1960, 311)

As I noted above, the house example is peculiar, and this quotation from the *Topics* suggests that the different contraries of a single term indicate a lack of unity within the meaning of the term. The lack of unity between the two senses of τὸ καλόν, however, is not like that of the "bark" of a dog and the "bark" of a tree. Indeed, within the context with which we are concerned (the noble and the beautiful), τὸ καλόν has the same contrary—τὸ αἰσχρον, although, as we have seen, there is some equivocation within this contrary term as well.

At the beginning of this paper, I alluded to "the one" (τὸ ἕν) and "the undetermined dyad" (ἡ ἀόριστος δυάς), Platonic "principles" (ἀρχαί) mentioned by Aristotle (*Metaph.* 1081a.13–17) and given great emphasis by the early Academy, neo-Platonists, and the Tübingen School. A too simple explanation for the twofold nature of τὸ καλόν could be that since all that exists partakes of the one and the two, all καλόν things are susceptible to the doubling power of the dyad.

The twofold nature of τὸ καλόν stems in my view from the twofold nature of human desire—we desire, we are attracted by, what is beautiful-noble, and we desire to be desired, to be recognized by others, as noble-beautiful. This twofold desire splits the καλόν, which is characterized by the seven characteristics we listed above, into two seemingly incommensurable terms: the noble and the beautiful. While these terms have much in common, their oneness, like the bound unity of Ares and Aphrodite, seems temporary at best.

The dialectical search for a definition that unites the noble and the beautiful into a "one" in fact dissolves them, for seeking out what is attractive in the noble and the beautiful leads us to the good (τὸ ἀγαθόν), which is truly a one. The move to "the good" that our inquiry into τὸ καλόν seems to commit us to, requires us to leave "the incapacitation of calculation" behind: we cannot allow ourselves to be "stunned" by the beauty of Aphrodite or the nobility of Ares—instead we must look and see whether Ares and Aphrodite are actually good in all respects. In doing this, we begin to leave the dyad of τὸ καλόν behind, even as we come to understand it more clearly.

Notes

1 For a few recent discussions in English see: Lear (2015); Asmis (2010); Nehamas (2007); and Tate (2015).
2 Insofar as Tate holds with Gadamer and Heidegger that thinking "in a sufficiently Greek way" (2015, 23) will allow us to "recover" τὸ καλόν and Kosman says there is "the concept of *kalon*" (2010, 351).
3 Second, we could see the various senses of τὸ καλόν as something that "seems to depend on little more than a pun" (Nehamas 2007, 102).
4 As Lear notes, the "ladder of love" section of the *Symposium* depends on a sense of τὸ καλόν that connects what I have been referring to the noble and the beautiful (2015, 359).
5 Praise and the desire for praise are related to beauty however.
6 Compare Lear for additional discussion of how the figwood spoon is a problematic exemplar of τὸ καλόν (2015, 361–362).
7 The point is not καλόν things are thereby ὠφέλειαν but rather that things that are ὠφέλειαν are καλόν. See Barney (2010, 365).
8 Tate is helpful in outlining Gadamer's threefold characterization of the beautiful in terms of "transcendence," "radiance," and "measure" (2015).
9 The mention of a corpse calls to mind the story of Leontios in Pl. *Resp.* 439e–440a. There, Leontius is transfixed by the desire to view the corpses of men killed by public execution, a sight which he ironically and self-disparagingly calls "the beautiful sight" (τοῦ καλοῦ θεάματος, 440a3). The attraction of the shameful and horrific explored in the story of Leontios highlights the duplicity of desire. I am grateful to D. M. Spitzer for reminding me of the relevance of this passage to my theme.
10 Compare Barney (2010, 365–366) and Tate (2015, 31–34).
11 Barney calls our attention to *Republic* 479a and *Phaedrus* 74b where it is claimed that "sensible particulars exhibit compresence of opposites: anything beautiful 'down here' is also ugly in some respect" (2010, 364). My point is that there is a conceptual conflict as well as a form-particular conflict.
12 All translations of *Laws* are from Pangle (1980).
13 Readers might reasonably ask why Ares, a god associated with warfare and violence, is taken as the paradigm of nobility. Following Jaeger, but also Nietzsche and Adkins, I believe that Ares is an important image of virtue (ἀρετή) for the Presocratic Greeks. As Jaeger observed, in early Greek literature ἀρετή "denotes the strength and skill of a warrior or athlete, and above all his heroic valour," that remains "closely bound up with physical power" (1945, 5–6). The etymological connection between ἀρετή and Ἄρης is noted by Liddell and Scott (*LSJ* sv. Ἄρης) and it leads them to note that the first notion of virtue is that of "*manhood, bravery in war.*"
14 We should note that Aphrodite's θυμός, referred to here, links her with Ares.
15 All translations of Tyrtaeus are from Gerber 2009; some include minor alterations.
16 Contrast Tate, where Gadamer emphasizes the "suddenness" of the beautiful (2015, 24). The temporality of the beautiful is an important question to investigate, but space does not permit me to do so here.
17 Translations of *Gorgias* are by Zeyl in Cooper 1997.
18 I believe that the Hegelian distinction stems from Rousseau's *amour-propre* and *amour de soi.*

Bibliography

Adkins, Arthur. 1960. *Merit and Responsibility: A Study in Greek Values*. Oxford: Clarendon Press.

Aristotle. 1924. *Metaphysics*. Edited by W. D. Ross. Oxford: Clarendon Press.

———. 1960. *Topica*. Translated by E. S. Forster. Loeb Classical Library. Cambridge: Harvard University Press.

Asmis, Elizabeth. 2010. "Foreword to 'Beauty, Harmony, and the Good'." Special issue, *Classical Philology* 105, no. 4: i–iii.

Barney, Rachel. 2010. "Notes on Plato and the Good." In "Beauty, Harmony, and the Good," edited by Elizabeth Asmis. Special issue, *Classical Philology* 105, no. 4: 363–77.

Carson, Anne, trans. 2002. *If Not, Winter: Fragments of Sappho*. New York: Vintage Books.

Diogenes, Laertius. 1950. *Lives of Eminent Philosophers*. Edited and translated by R. D. Hicks. Vol. 1. Cambridge: Harvard University Press.

Gerber, Douglas E., ed. and trans. 1999. *Greek Elegiac Poetry*. Cambridge: Harvard University Press.

Homer. 1919. *The Odyssey*. Translated by A. T. Murray. Cambridge: Harvard University Press.

———. 2007. *The Odyssey of Homer*. Translated by Richmond Lattimore. New York: Harper Perennial.

Jaeger, Werner. 1945. *Paideia: The Ideals of Greek Culture*. Vol. 1. Translated by Gilbert Highet. New York: Oxford University Press.

Kojève, Alexandre. 1969. *Introduction to the Reading of Hegel*. Translated by James H. Nichols, Jr. Ithaca: Cornell University Press.

Kosman, Aryeh. 2010. "Beauty and the Good: Situating the Kalon." In "Beauty, Harmony, and the Good," edited by Elizabeth Asmis. Special issue, *Classical Philology* 105, no. 4: 341–57.

Lear, Gabriel Richardson. 2010. "Response to Kosman." In "Beauty, Harmony, and the Good," edited by Elizabeth Asmis. Special issue, *Classical Philology* 105, no. 4: 357–62.

———. 2015. "Beauty (KALON)." In *The Bloomsbury Companion to Plato*, edited by Gerald A. Press, 139–41. London: Bloomsbury.

Nehamas, Alexander. 2007. "Beauty of Body, Nobility of Soul: The Pursuit of Love in Plato's Symposium." In *Maieusis: Essays in Ancient Philosophy in Honour of Myles Burnyeat*, edited by Dominic Scott, 97–135. Oxford: Oxford University Press.

Plato. 1900–1907. *Platonis Opera*. Edited by John Burnet. Oxford: Clarendon Press.

———. 1980. *The Laws of Plato*. Translated by Thomas L. Pangle. New York: Basic Books.

———. 1993. *Symposium*. Translated by Seth Benardete. Chicago: University of Chicago Press.

———. 1997. *Complete Works*. Edited by John Cooper. Indianapolis: Hackett.

Scholtz, Andrew. 2007. *Concordia Discors: Eros and Dialogue in Classical Athenian Literature*. Cambridge: Center for Hellenic Studies.

Strauss, Leo. 2001. *On Plato's Symposium*. Edited by Seth Benardete. Chicago: University of Chicago.

Tate, Daniel L. 2015. "Renewing the Question of Beauty: Gadamer on Plato's Idea of the Beautiful." *Epoché* 20, no. 1: 21–41.

5 *Philosophia* in Plato's *Gorgias*

Christopher Moore

Introduction

The *Gorgias* is Plato's greatest protreptic to *philosophia* explicitly so-called, I believe—more wide-ranging than the *Phaedrus*, less tendentious than the *Phaedo*, more democratic than the *Republic*, less digressive than the *Theaetetus*, and more positive, so to speak, than the *Euthydemus*.[1] In the *Gorgias*, Socrates has his most impressive trio of interlocutors (cf. Pl. *Grg*. 527b1): Gorgias and Polus are among the leading teachers of intellectual performance of Socrates' generation,[2] and Callicles has the most neatly delineated and contrarian view of moral psychology known to us from the period.[3] Thus they put into sharpest relief the special value of studying *philosophia* (by using the Greek transliteration, I mean to refer to that which Plato's characters call *philosophia*, not necessarily the twenty-first-century* common understanding of "philosophy"). Remarkably, however, though the dialogue's interlocutors occasionally mention *philosophia*, and reflect deeply on its alternatives, nowhere does one of them specify precisely what the practice amounts to.[4] What exactly is it that Socrates prefers to rhetoric, and with what exactly does Callicles take issue? This paper aims to reconstruct what philosophia—the practice enjoined by the dialogue—is.[5]

My answer relies on an unfamiliar observation: that Callicles admits to having practiced philosophia. And he admits to having deliberately halted himself from becoming too "precise" about it; he has taken care not "to become too wise." Doing so, he says, would interfere with other ways of learning about—and asserting himself in—public life. Below, we will see in more detail what he says and will consider why he says it. We will also rely on the most direct evidence for the nature of philosophia: what Socrates himself is depicted doing in his conversations in this dialogue, especially to the extent it differs from what others do in their periods of intellectual reflection and dialectical engagement.

What I claim typifies philosophia in the *Gorgias*, in brief, is the pursuit of consistent views about even the small puzzles connected to the best way to live, irrespective of the amount of time it takes to attain consistency. This definition

* Except for this, all dates are BCE.

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does include a general scope of content, "how best to live," though it makes no assumptions about what far-flung views might fall within that scope: it could include cosmology, or geometry, or politics, or linguistics. But the marked features of the definition are two: that the issues attended upon may look *small*, of apparent triviality or distance from the topic at hand; and that there need be no abandoning of the quest to resolve them, even if keeping at it risks interfering with more evidently urgent business. Distinctive of this formulation of philosophia is its largely procedural and third-person perspective: it concerns how long one ought to keep talking, and how apparently significant the matters of scrutiny are. It does not have doctrinal positions built into it, by contrast with the soul-body distinction of the *Phaedo*'s "training for dying"; the theological vision of the *Theaetetus*' "becoming like god"; or the universals-particulars division of the *Republic*'s "love of wisdom rather than mere opinion." Belief in such doctrines may of course follow from the efforts of philosophia, and may even justify the doing of philosophia. But the *Gorgias* takes as its focus what one does when one does philosophia, with attention to the actions it involves: namely, a kind of open-ended but also rigorous conversation.

The most interesting part of this study concerns Callicles' philosophizing and his apotreptics from philosophia directed at both Socrates and himself; so, after a review of the dialogue's references to philosophia, we look to Callicles. Then I show that Plato's innovation is not in the formulation of a new meaning of philosophia but in articulating and dramatizing the already-presupposed ideal of its practice, as becomes clear when we look at some pre-Platonic uses of the term philosophia.[6] We conclude this chapter by considering two scenes in the dialogue in which Plato depicts this view of philosophia.

Mentions of Philosophia in the *Gorgias*

For all the importance I proclaim the *Gorgias* represents as a protreptic to philosophia, the term philosophia and its cognates appear in only three places in the dialogue: as the abstract noun or verb in the first six pages of Socrates' debate with Callicles (481d4–487c7) and once at a turning point in that debate (500c8); and as the agent noun *philosophos* in the dialogue's mythic capstone (526c3). We will take these instances in reverse order.

The only instance of the term philosophos ("philosopher") appears in Socrates' final paragraph of his myth of the afterlife judgment that he presents to Callicles. The kind of soul sent by Rhadamanthys (and Aeacus and Minos) to the Isles of the Blessed is the one that "has lived piously and with truth (μετ' ἀληθείας), a private man or some other, and especially, as I might put it, Callicles, a philosophos (φιλοσόφου) who did his own things and was not meddlesome in life" (526c1–4).[7] In the ensuing peroration, Socrates says what he takes from this myth: that one should not cultivate one's reputation, since one's reputation does not ultimately matter; one should instead "practice truth" (τὴν ἀλήθειαν ἀσκῶν, 526d6) so as to become as good indeed as possible. This practice means rejecting those positions that have fallen to refutation (τῶν... ἐλεχομένων, 527b3) and embracing, even if

tentatively, those that have not. The present conversation has supported the position that one ought rather to suffer injustice than to do it and that, should one have done an injustice to anyone, one should be disciplined (527b4–c1). Only after becoming as good as possible ought one to pursue politics (527d4).

Socrates does not here define the term philosophos, but he presents it as apposite to the identification of the right kind of life. The myth began with Socrates' adumbration of the judgment scenario: you go to the Isle of the Blessed if you have "gone through life justly and piously" (523a7–b1). When Socrates concludes, he replaces "justly" with "with truth." He is not thereby making a substantive shift. "Piously" may stand in for "piously and justly" since both are instantiations of *sophrosune* ("self-discipline"), the more fundamental virtue, as Socrates argues earlier (507b4–5). More importantly, acting justly is linked with truth in a statement that Socrates makes halfway through his myth: the souls of kings tend to be crooked on account of "falsehoods and deceptions … thanks to an upbringing devoid of truth (ἄνευ ἀληθείας)" (525a2–3). Justice (and the sophrosune of which it is a part) is also linked, in this dialogue as much in *Charmides* (161b8) and *Republic* (433b3), with doing one's own things and not doing others' jobs. The easiest way to keep to oneself is by remaining a private citizen, though Socrates does not restrict his account to it. Callicles' aspiration to be a political agent presumably explains Socrates' triple emphasis on staying in one's lane. Midway in this specification of the good life—as pious, in accordance with truth, private, and concerned with one's own affairs rather than with others'—Socrates interjects, quite self-consciously, his opinion that this may well be the philosophos' life. The philosophos, who characteristically does his own things, also characteristically lives piously and in accordance with truth. Socrates' statement does not add more information about the good life or the philosophos' life, but it does connect his claim here with the earlier discussion about the value of philosophia: a life of philosophia, as described before, is just the kind of life deemed good by Rhadamanthys and the other judges. To see more precisely what a life of philosophia involves, we must turn to earlier *Gorgias* passages.

The most recent reference to philosophia came 25 pages earlier, when Socrates was resituating his exchange with Callicles. He says there that they have been drawing a contrast between two ways to live one's life and thus to achieve happiness. There is, on the one hand, Callicles' life, "doing the things of men, speaking to the populace, practicing rhetoric, and doing politics in the way you now do politics" (Pl. *Grg.* 500c4–7). And then there is, on the other hand, the life of philosophia (ἐν φιλοσοφίᾳ, 500c7–8). The philosophical life must not, then, get involved in the familiar kinds of affairs, appealing to large audiences and seeking power and influence in the normal way. But this does not, of course, tell us what philosophia actively does do. Which affairs if any should one involve oneself in? To whom should one speak? What skills should one practice? How should one in fact do politics? Since there are not just two choices for each question, we cannot simply answer with the opposite of Callicles' answers. This passage, then, does not specify the meaning of philosophia. We must turn, again, to yet earlier passages.

The core of Plato's account of philosophia comes about halfway through the dialogue, early in the debate between Callicles and Socrates. Even there, however, it emerges slowly. Socrates introduces the term philosophia at the start of his answer to Callicles' initial question: having heard Socrates' examination of Polus, Callicles asks Socrates whether he can be serious, given that his proposal (that we should seek punishment for injustices we have done) would undermine our usual way of life. Socrates says that he hopes to be able to show Callicles that he is serious, a hope dependent on their having shared an experience in common, being lovers. Just as Callicles loves the people and Demos son of Pyrilampes, Socrates loves philosophia and Alcibiades son of Clinias (481d3–5). To philosophia, Socrates ascribes the statements to which Callicles took exception, about the value of being punished, statements that, Socrates says, never change, though they are in principle open to further attempts at refutation (482a3–b4). Socrates here contrasts philosophia with the democratic populace in terms of view-stability—how liable what each "says" is to change—but also implicitly in terms of content: whether unrequited iniquity is the worst thing for someone.

Focusing on the latter, one might suppose that philosophia amounts to a doctrinal position, indeed a rather dogmatic one about the nature of justice and punishment. But we will see that this is not so. Most of the evidence comes from later stages in the debate, but the present passage contains important hints about it. Socrates says that one could try to get philosophia to stop saying what she says (παῦσον, 482a4; cf. παύσει ... παύσῃ, 481e8–482a1), and do so through examination (ἐξέλεγξον, 482b2; cf. ἀνέλεγκτον, b4). This means that philosophia's position is not final, and depends on reasons that may be tested and, conceivably, undermined. Further, philosophia's position represents beliefs we already have, though they may be merely implicit or inconsistent with other beliefs we have; and those beliefs tend to be the more robust of one's beliefs such that they, rather than others, persevere when an inconsistency is found. Socrates says that, should Callicles not come to accept philosophia's position, Callicles will end up being in disagreement with himself (οὔ σοι ὁμολογήσει Καλλικλῆς, 482b5; διαφωνήσει, 482b6; cf. 482c1–3); but if Callicles does accept philosophia's position, so Socrates implies, Callicles will not be in disagreement with himself, since his other assumptions will have been vanquished. Finally, philosophia can be thought to generate a broad range of views, just as the populace, or Alcibiades and Demos for that matter, can; its view of justice just happens to be what the conversation with Polus evinced. What we can conclude about philosophia here, then, is that it reflects—or draws out of an inconsistent or inchoate confusion—the relatively more stable, if still ultimately tentative, views one has on questions connected to living one's life well.

We learn more about philosophia when Callicles describes and evaluates Socrates' philosophia. Socrates never tries to correct Callicles' description, accepting it (though not his evaluation); and naturally Socrates and Callicles draw from the same Athenian vocabulary. Thus we can take Callicles' word for it. Callicles begins his response to Socrates by diagnosing as unreal the contradictions into which Socrates drew Gorgias and Polus. Whereas Socrates "claims he is

pursuing the truth" (φάσκων τὴν ἀλήθειαν διώκειν, 482e4)—that is, by juxtaposing various commitments a person has—he is actually, so Callicles says, obscuring the difference between *phusis*, what someone really believes, and *nomos*, what someone thinks he must present himself as believing, and is wrongly treating the nomos-governed belief as the more reliable or fundamental (482c4–483b4). Callicles says that reflection shows otherwise: our conventional beliefs about justice are sociologically explicable defense mechanisms, and a clear-eyed view of human and animal nature shows that justice really involves, contrary to Socrates' view, impressing one's will on others (483b4–484c3).

At this point Callicles stops with the theorizing and says that Socrates could see the truth of his view should he only abandon philosophia and turn to greater things (τὰ μείζω, 484c4–5). Somehow, Callicles implies, philosophia prevents one from appreciating the reality of human nature. This is strange, given the argumentative content of Callicles' speech, which is full of interesting distinctions, inferences, counter-examples, and reasoned interpretation. Callicles must be suggesting, then, that doing philosophia, fine on its own, prevents one from doing better things as well; and evidently Callicles believes that these better things provide insight or benefits that philosophical discussion does not.

This is what Callicles goes on to say. Philosophia may well be charming should one pursue it moderately and in its place, during the relevant age of life (μετρίως ἅψηται ἐν τῇ ἡλικίᾳ, 484c6–7). But it can be destructive, if one spends more time in it than one ought and later than that age of life. That is because it prevents one from becoming experienced in those matters that allow one to be *kalokagathos* and well-reputed: *nomoi* of the city; speeches of counsel on matters of private and public affairs; human pleasures and desires; and in general how people are (τῶν ἠθῶν) (484d2–6). Those practicing philosophia avoid city centers and agoras, spending the whole of their lives whispering in a corner with three or four young men, not saying aloud anything substantive (μέγα), purposive (ικανόν), or suitable for a free and enfranchised political agent (ἐλεύθερον) (485d5–e2). And therefore they would be unable to make persuasive speeches, in favor of policy in the assembly or in defense of oneself in the courtroom (485e6–486c3). In closing, Callicles makes his advice concrete: "stop your examinations" (παῦσαι δὲ ἐλέγχων, 486c4); "leave your subtleties (τὰ κομψά) to others" (486c6), that is, your "follies [and] trains of nonsense" (ληρήματα... φλυαρίας, 486c6–7); and do not emulate (ζηλῶν) those who "examine small matters" (ἐλέγχοντας... τὰ μικρὰ ταῦτα, 486c8).

Callicles' assessment of philosophia has now come into focus, and with it the picture of the practice assumed in this dialogue. Callicles finds the scope of philosophia to be too limited to serve as sole preparation for the good life. It does not give one the experience or knowledge one needs of many relevant parts of that life. These are largely the empirical facts of one's city: its norms and institutions, what its residents are after, and how to leverage those goals and preferences, in light of the laws, to one's advantage. Callicles only hints, near the end, at the reasons for philosophia's failure to provide that knowledge. First, philosophia largely involves cross-examination, testing, of one's interlocutors' views. So it

focuses not on learning how the world is, nor even on someone's knowledge of the way the world is, but on the concordance among a single person's beliefs. While this may teach one about the sorts of things people believe—not wholly disconnected from what Callicles thinks being *kalokagathos* requires knowing—doing so would be only an accidental byproduct of the logical assessment. And though one might generalize over people, pragmatically it would teach you only about the beliefs or tendencies of those willing to undergo examination, which would surely be a much smaller group than those willing to participate in democratic politics. So philosophia deals with small rather than large issues: the personal rather than the social, the private rather than the public. Second, philosophia not only avoids big issues; it literally deals with "little things" (τὰ μικρά ταῦτα), "details" (τὰ κομψὰ ταῦτ'), "trivialities" (ληρήματα... φλυαρίας). Obviously these are all external judgments, but when compared to Callicles' criteria of the proper topics of conversation, "grandness" (cf. μέγα), "efficacy" (cf. ἱκανόν), and "liberality" (cf. ἐλεύθερον), we can see what he means. Philosophia, to appearances, does not solve urgent and evident practical problems. Again to appearances, it gets hung up in niceties of definition and distinction, matters of minor, abstract, or moot relevance. Callicles does not, absolutely speaking, think that the topics of philosophia are stupid, incorrect, or meaningless; he praises them as interesting and worth doing when young. But compared to the topics of the praiseworthy life, they are just too inconsequential. Far from finding the matter of philosophia too profound or too aspirational, as others might critique it, Callicles finds it beneath the dignity and outside the ambit of the mature adult citizen.

This is in the direction of a procedural definition of philosophia. Nothing is said about the attainment of knowledge or wisdom rather than belief or opinion; or about seeking to understand universals rather than traffic only in particulars; or to have arguments that are sound rather than just sophistically attractive. Nor is the point that philosophia is governed by an investigative or cooperative rather than a contestatory or competitive spirit. Philosophia is, rather, distinguished by its manner of progress, examination, and tolerance even for putatively small issues.

Callicles' History of Philosophia

Callicles charges Socrates with an unreasonable ongoing commitment to philosophia. It might look, then, that the dialogue contrasts Socrates, the philosophos, with three of the most impressive non-philosophoi of his time, those who give the best argument—whether as model, aspirant, or theorist—in favor of the life of rhetorical self-assertion and political dominance. But Callicles, seen in comparison with Socrates, is a complicated case. We lack a contrast between the philosophos and the anti-philosophos; what we have is a contrast between the full-time and the part-time or erstwhile philosophos. That is because, as is rarely acknowledged, Callicles admits to his own history of participation in philosophia.

Callicles' admission is tacit; Socrates implies it, and Callicles does not contest it. Socrates accepts Callicles' challenge with remarkable equanimity, saying that of all possible sources of pressure on his (philosophia-informed) views, he is glad

it is coming from Callicles. Callicles, he says, is well-educated, has goodwill, and speaks openly. The first point he says is generally accepted, though Callicles' sophisticated speech, with its citations of Euripides and Pindar, gives further proof. It is the second point that matters here. Socrates says that his evidence starts from the fact that Callicles with three others—Teisander of Aphidnae, Andron son of Androtion, and Nausicydes of Cholarges—constitute a group that shares in "*sophia*" (487c2). Sophia is being used synonymously with philosophia, as we see from Callicles' interchanging use of the terms in his own speech (486b4). Only Andron remains in the historical record, in Plato's *Protagoras*, at Callias' party where he was querying Hippias about physics, especially astronomy (*Prt*. 315c5). But Andron's activity later comes to be referred to explicitly as philosophia (*Prt*. 335d8), and Callicles' group of four seems strikingly like the group of "three or four young men" with whom he accuses Socrates of doing philosophia.

Socrates says he overheard Callicles' group deliberating (βουλευομένων) on a meta-question: "how far should one pursue sophia?" (ὅποι τὴν σοφίαν ἀσκητέον, Pl. *Grg.* 487c5). He says that among the possible answers, one was coming out ahead (ἐνίκα), the one that said that one should "not be eager to philosophize (φιλοσοφεῖν) to the point of accuracy (τὴν ἀκρίβειαν)," and that the group's members urged one another "to take care not to become more sophos than one ought" (487c6–d2). This is a stunning observation. Socrates draws only the point that Callicles is exhorting him to do what he exhorted his friends to do, and is thus showing goodwill toward him. But we can draw rather more, which together tells us something important about philosophia. Philosophia is something that Callicles and his friends were pursuing. There is no reason to assume that they pursued it poorly or for the wrong reason; Callicles has intriguing and fresh views, and Socrates never derides his efforts. They formulated their pursuit of philosophia as a pursuit of sophia and a striving to become sophos. This attainment of sophia is something assessable in terms of accuracy (τὴν ἀκρίβειαν), and thus it must be knowledge or understanding. They felt a drive to gain greater accuracy and thereby to become more sophos, a drive they reflected on and judged it best to counter. Socrates presents them as concluding what Callicles asserted to him, that philosophia comes to interfere with alternative and better ways of knowing and acting. This was not, evidently, a foregone conclusion, given the strength of their desire to continue philosophizing indicated by the language of psychology and persuasion, "deliberating," "eager," "urging on another," and "taking care," in Socrates' report.

Socrates and Callicles share a taste for philosophia but they differ, then, in the distance they allow themselves to be taken by it. That shared taste must be one for truth, clarity about the norms guiding our lives. This involves a willingness to examine views with the result that they saw through mere convention to more foundational layers, as Callicles' opening diagnosis of Socrates' phusis/nomos equivocations shows. Callicles and his friends must have realized, however, that perfect clarity and accuracy takes a very long time, and they presumed a diminishing marginal utility.[8] They had to restrain themselves: inclined as they may have been to follow the argument whither it goes, or to check their work, they must

have judged their inclinations unreliable indicators of the way to happiness. They feared getting bogged down in precisifications—probably of the very sort Socrates immediately turns to, namely the possible differences between "the superior, the better, and the stronger" (488d2–3).[9] That fear contributed to the vagueness of Callicles' theory on this matter, and its vulnerability on account of that vagueness. The distinctions probably seemed trivial (τά μικρά), just pedantic niceties, as Callicles' outburst suggests (489b7–c1). Yet, Socrates shows in the rest of his conversation with Callicles, that sophia comes about only with clarity (σαφῶς, e.g., 488d2, 4) about these little things. And clarity comes through dogged discussion of them, stopping only once full precision has been attained—if this is ever attainable. Sharp disagreement between Socrates and Callicles comes later, when Socrates accuses Callicles of willingly leaving an argument "in the middle" and "unfinished" (505c7, d6).

So a protreptic to philosophia is an exhortation, first, to examining views for consistency, which includes clarity, and second, to keeping at the examination for as long as it takes, until there are no opportunities for confusion or mistake. Both aspects require coming to accept the absolute value of having true beliefs about the right way to live. Callicles accepts considerable value in these beliefs. But he does not accept enough value in them: he is willing to accept his beliefs as true—for example, that we have natural desires to lord ourselves over others and that these natural desires are good—and then act on them, for example by pursuing traditional power politics, without submitting them repeatedly to the most rigorous scrutiny. Case in point: he did not seek out Socrates' assistance as a *basanos* of the authenticity of his views (e.g., 486d8).

What we have found is that in Plato's *Gorgias*, philosophia is a kind of conversation, a talking through of the consistency of one's beliefs. A protreptic to philosophia concerns, then, the value of doing so, even when at the cost of exhausting length. Evidence for this procedural or conversational view of philosophia comes from those writing about philosophia before and during Plato's time.

Four Non-Platonic Uses of Philosophia

Philosophia cognates start showing up in Ionic at the beginning of the fifth century, and are exemplified in Heraclitus (φιλοσόφους ἄνδρας, B35 DK/D40 LM), Herodotus (φιλοσοφέων, Hdt. 1.30.2), and the Hippocratic author of *On Ancient Medicine* (φιλοσοφίην, Hippoc. *VM* 20.1). I will skip over them to focus on four writers of Attic who use philosophia words: Thucydides in his speech from Pericles of 431; Gorgias in his *Helen* written possibly in the 410s; Aristophanes in his *Ecclesiazusae* of 391; and Lysias in a speech written sometime between 403 and 380. Other Attic uses are found in Isocrates, Alcidamas, and Xenophon, all of them close contemporaries of Plato; an analysis of them would show the same thing.

It is controversial whether Thucydides accurately records the words of Pericles' funeral oration of 431 or has concocted them for him; Thucydides is thought to have finished composing as late as the mid-390s.[10] In either case, in the middle of

the speech, Thucydides' Pericles says of the Athenians that "we aspire to beauty with economy, and we philosophize (φιλοσοφοῦμεν) without weakness" (Thuc. 2.40.1). Pericles immediately glosses his meaning:

> Wealth we use rather for timely activity than for boastful speech [etc.]. Some of us concern ourselves with both household and political matters, while others, though occupied by activity, lack nothing in their appreciation for political matters. We alone consider the man who lacks any part in these to be not unmeddling (ἀπράγμονα) but rather useless, and it is we ourselves who either decide or at least make correct sense of affairs (ἤτοι κρίνομέν γε ἢ ἐνθυμού μεθα ὀρθῶς τὰ πράγματα),[11] not considering it to be speeches (λόγους) that undermine activity but rather the failure to have already come to understand, through speech (λόγῳ), how to act when one must. For we so excel others in both our boldness and especially our thinking through (ἐκλογίζεσθαι) whatever it is we pursue; in other men, confidence is really ignorance, and calculation (λογισμός) brings hesitation. The men rightly judged strongest in soul are those who know most clearly (σαφέστατα γιγνώσκοντες) what is terrible and what is pleasurable and who, on account of this, do not turn away from risks.
>
> (2.40.1–3)

Pericles cites (or invents) a norm of civic cognizance: everyone pays attention to political affairs. He treats absenting oneself from politics, the quiescence or keeping-to-oneself sometimes treated as an admirable self-restraint, as "useless." But involvement does not mean the exercise of institutional power over others, as Callicles (or, from Aristophanes' *Wasps*, Bdelycleon) might have it; it means thinking and talking through issues to the point of "correctness" (ὀρθῶς). Pericles repeatedly emphasizes the use of "speech." While he may seem, superficially, to refer to the performative exchange of policy speeches in the assembly, his repeated emphasis on reasoning, too, suggests meaningful deliberation—presumably the conversations before or alongside formal votes. It is these exchanges, which have investigative or clarificatory purposes, that eventuate in readier and surer responses to emergencies. So philosophia, what may look like idle, apolitical, and enervating chitchat, is in fact a matter of getting, through discussion, clearer and more exact understanding of matters of eventual civic relevance. This lines up well with Plato's presentation of philosophia in the *Gorgias*.

Sometimes dated to 427, though plausibly pushed a decade later given possible intertextuality with Euripidean tragedy, Gorgias' *Helen* argues, among other claims, that persuasive speech molds the minds of its listeners, and Gorgias gives three kinds of speech-situation to support his claim (Gorg. *Hel.* 13). The speeches of *meteorologoi* make plausible and apparent what had been incredible and unclear—perhaps both standing views of the cosmos and those views articulated in others' meteorological speeches. Gorgias evidently has in mind the kind of statement lampooned in Aristophanes' *Clouds* about the sky-as-a-lid and the source of thunder (Ar. *Nub.* 374–384), transposed into a competitive or

enlightening environment. The obscurity of the astronomical realm surely reveals the power of speech: there is little of personal experience that could ground beliefs or keep them stable against the didactic or explanatory professions of meteorological experts. Similarly, Gorgias says, "necessary" speeches—perhaps he means political proposals and legal pleadings—use words to please and persuade the audience. Again, the difficulty of knowing what really happened (in the forensic context) or what consequences a decision will really have (in the policy context) means that appeals to often-inconsistent existing presumptions will be common. Finally, in contests of "philosophical" speeches (φιλοσόφων λόγων ἀμίλλας), quickness of judgment (γνώμης τάχος) reveals the mutability of belief-based opinions (Gorg. *Hel.* 13). Gorgias defines the content of philosophy only negatively: for him it is not meteorology, presumably explanations of celestial or more broadly natural phenomena without direct or immediate human relevance, and it is not forensic or legislative address, the resolution of practical and immediate social problems. What remains is something in between: reflection that has actual but non-immediate relevance. The "quickness of judgment" that characterizes philosophical debate suggest that critiques attack the form—the logic—of the opponent's argument. This suggests in turn that philosophia is distinguished principally by the examination of the position of one's opponent—doing so quickly before he moves on to the next step of his argument or counter-argument—rather than by the systematization of empirical observations, a long-term plan only the conclusions of which are presented at a performance. This encourages seeing philosophia as separate from physical theorizing and from practical deliberation; the mention of "quickness of judgment" suggests that it is a back-and-forth testing and defense of positions, where this involves checking the consistency of a position's parts and its justifications. This is, to be sure, a distinctive, important, and interesting practice, one deserving a name and sufficient prominence for Gorgias to mention in his *Helen*.

Late in the first decade of the fourth century, in his *Ecclesiazusae*, Aristophanes has Praxagora win, for the women of the city, democratic control over the Athenian assembly. The Chorus tells her to reveal the plan that her government will institute:

> Now indeed you must rouse a concentrated mind (πυκνὴν φρένα) and a
> philosophic thought (φιλόσοφον... φροντιδ') that knows how
> to defend (ἀμύνειν) your fellows.
> For, an idea comes from your tongue
> for a shared good fortune, exalting the citizen populace
> with myriads of benefits of life. Now's the right time to clarify (δηλοῦν)
> what can be done;
> our city needs some wise invention (σοφοῦ... εὑρήματος).
> So go through the whole of it,
> leaving only what has been done and what has already been said earlier.
> […]

> But don't delay—you've got to nail down those thoughts (διανοίας)—since quickness (ταχύνειν) contributes most to the satisfaction of the spectators.
>
> (Ar. *Eccl.* 571–580)

A "philosophic thought" here seem to be one that goes beyond one-off practical proposals. It must address the highest political norms: the common prosperity, the civic realm, flourishing in its widest possible description. It must be sufficiently detailed, not just a bromide or inarticulate nudge, and it must be new and thoughtful, not just a band-aid or piece of re-tread. So, philosophic thoughts, by contrast to regular thoughts, tend toward abstraction and generality while at the same time toward precision and robustness. As a description of thought, Aristophanes' use of the adjective philosophos (φιλόσοφον) does not tell us everything we would want to know about his understanding of philosophia as a practice. But we can suppose that "philosophic thoughts" are the nominal outcomes of conversations of philosophia—clarifications of views about, for example, the fundamental arrangements of a constitution.

Our last example of non-Platonic philosophia comes from Lysias, writing in the first two decades of the fourth century. In his "On the refusal of a pension to a handicapped person," the narrator describes his thought process about human thought processes: "I recognized, council, that everyone who has a misfortune investigates (ζητεῖν) and philosophizes (φιλοσοφεῖν) how to carry on least painfully" (Lys. 24.10.4). In the next sentence he glosses his activity as "I discovered" (ἐξηῦρον, 24.10.7). Thus, for Lysias, philosophizing involves hypothesizing and reflecting on various paths out of a difficulty. This has a more practical orientation than presumably Gorgias has in mind, but some attenuated practicality was present in Thucydides' and Aristophanes' usages. Perhaps for Lysias *philosophein* refers more than *zêtein* to the use of sequential branching arguments, or more creative and tenuous possibilities.

We may now summarize our findings. Philosophia tends to involve in-depth conversation and reflection about doing well in life, personally or socially, usually at some distance from an immediate practical goal. Reliance is less on empirical observation than on the testing of positions or clarification of norms. Suffice it to say, this background maps directly onto the *Gorgias*.

The *Gorgias* as a Model of Philosophia

Some Platonic dialogues may seem not to enact the philosophical practice their conversations describe or laud: the *Republic*, for example, does not unfold with the curriculum of the philosopher-kings, and it is uncertain whether it even manifests the "dialectic" propounded as the philosopher-kings' main activity. The *Phaedrus* does not taxonomize the speech-types and soul-types Socrates suggests a philosophical rhetoric would require; it instead includes imagined speeches encouraging that such taxonomizing occur. Even the *Euthydemus* proceeds largely (though not entirely) by depicting the *via negativa*, the captious exchanges by Euthydemus

and Dionysodorus that resemble, only incompletely, the conversational lessons of philosophia. The *Gorgias* is distinctive, I believe, in presenting the conversations of philosophia that are praised in the course of the depicted conversation.

Saying this may be to say something so obvious as not to need stating or exemplification, that Plato's dialogues depict philosophia. But this is not quite obvious. Plato's dialogues are often taken to depict the exchanges preparatory to real or serious or high-level philosophia. That is because philosophia is often imagined, even if not expressly articulated, as something more than elenctic exchange—namely, as the intuition of the eternal verities, or the contemplation of their nature, relationships, and significance. The *Gorgias* does not, however, assume this image of philosophia. Indeed, I do not think that any Platonic dialogue is committed to this image of the practice of philosophia, though conversations in some of them allow that instances of philosophia may well entertain questions of the Forms, and indeed that philosophia may be a worthwhile enterprise only if Forms (etc.) existed and were knowable through philosophia. But the content of certain philosophia conversations and beliefs about the conditions for successful philosophia are not themselves definitional of, or restrictive to, the practice of philosophia.

I will conclude here with some words about the early pages of the dialogue, to show how I believe it depicts philosophia. After appearing so late as to miss Gorgias' performance—perhaps organized by Callicles—Socrates states that he wants to learn from (πυθέσθαι παρ᾽ αὐτοῦ) Gorgias, in conversation (διαλεχθῆναι), about the power of his skill, what he makes professions about, and what he teaches (Pl. *Grg.* 447c1–3). Gorgias is prepared to address such questions (447c5–8; cf. 449c1–3). When Polus tries to stand in for Gorgias, in response to Chaerephon's standing in for Socrates, and fails to answer the question directly, Socrates thematizes his interest in brief and precise answers to his inquiries. Those questions look small—they request admissions of Gorgias that hardly seem momentous, surprising, or complicated. For example, Socrates asks after Gorgias' craft (449a3–4), though Socrates knew about Gorgias' performance (447b6) and his friend Chaerephon is friends in turn with Gorgias (447b2). He then asks about the scope of Gorgias' rhetoric (ῥητορική, 449d2). Socrates is not looking for a general idea, since he surely knows the basics of Gorgias' enterprise; he seeks after a precise delineation. This is the pursuit of accuracy and, to the dismissive observer, subtleties, niceties. Answers resolve neither evident urgent practical problems nor inform one about the social situation.

We see in the dialogue's middle an emphasis on getting to the end. Socrates tries to draw an intermediate conclusion with Callicles that, for the person with a soul in disarray, punishment is better than the lack of punishment. Callicles balks, and wishes to leave off the investigation. "Are we giving up our talk in the middle?" (505c7–8). Callicles says that they are, and Socrates refuses, several times again protesting the leaving of a conversation before it has come to an end (e.g., 505d6–7; cf. c10–d5). Socrates therefore continues on his own until he can reentice Callicles back in. It is here, then, more than in any instances of Socrates' analytic or imaginative competence, that we see Socrates' expression of the call of philosophia.

Notes

1 Other Platonic dialogues are of course protreptic, though explicitly to specific virtues, such as justice (*Alcibiades*, *Republic*, cf. *Clitophon*) and others of the canonical virtues (*Charmides*, *Laches*). The *Euthydemus* makes protreptic especially thematic (see Collins 2015, 53–144), though so does *Republic* (see Yunis 2007).
2 The bibliography on the man Gorgias is immense; see most recently Ioli 2013 (texts and commentary); *OCD*[4] s.v. Gorgias (concise overview); Barney 2016 (*Helen* as an example of one tack that philosophy could have taken); Schollmeyer 2020 (detailed commentary on *Helen*). For the life and significance of Polus, see Fowley 1997 (all the testimonia); Nails 2002, 252 (rather curt); *Dictionnaire des philosophes antiques* (= *DPhA*) Vb.1218–1221, s.v. Polus (bibliographically valuable).
3 The historical reality of Callicles is probably moot here, though given Plato's general procedure I am inclined to imagine that he was a real figure. See Dodds 1959, 12–14 (overview); Guthrie 1971, 101–107 (at 102 for historicity); *DPhA* II.168–169, s.v. Callicles.
4 Definitions of philosophia are, to be sure, rare, relatively brief, and indirect in the Platonic dialogues, notably in the middle of the *Republic*, in *Phaedo*, *Phaedrus*, and *Theaetetus*, and in *Rival Lovers*. For discussion, see Moore 2020, 221–259.
5 This question is not focalized even in scholarship putatively concerned with "philosophy in the *Gorgias*." For instance, Irani 2021 investigates Socrates' defense of the philosophical life over the rhetorical life, and concludes that Socrates urges us to care less about self-preservation than about wisdom and sophrosune, both of which are necessary for avoiding doing injustice, and attaining these virtues takes philosophia, but this article does not say what philosophia itself is. (The same holds for Irani 2017, despite its title; see Moore 2019.) Guthrie sees Socrates in the *Gorgias* as "the symbol of the philosophical life," but also sees the *Gorgias* as simply a compendium of familiar Socratic doctrines, and does not enter into a discussion of the meaning of that life (1975, 294–297). Kahn believes that the *Gorgias* is "Plato's manifesto for philosophy," but gives very little analysis of philosophia in the dialogue despite discussing negative and positive elenchus (1996, 125, 134–142, respectively). Irwin 1979 has no reference to philosophia in the book's Introduction, and at 484cd indicates only that "philosophy" is "Socrates' type of argument and discussion" (179).
6 For a longer argument to this effect, see Moore 2020.
7 All translations by the author.
8 A similar argument is made in Isoc. *Antid*. 261–271.
9 Cf. Benardete 1991, 70.
10 See Munn 2000, 5–6, 11–12, 305–306, 316–327.
11 This beginning of Thucydides' explanation is difficult to understand: Lattimore has "we ourselves either ratify or even propound successful policies" (1998, 93), emphasizing the role of popular decision making, in light of the work of an executive committee; C. F. Smith has "we Athenians decide public questions for ourselves or at least endeavour to arrive at a sound understanding of them" (1919, I.329), contrasting the Athenians with the Spartans; and Crawley has "we are able to judge proposals even if we cannot originate them" (this is the revised form in Strassler 1997, 113), noting the importance of evaluation.

Bibliography

Barney, Rachel. 2016. "Gorgias's Encomium of Helen." In *Ten Neglected Classics of Philosophy*, edited by Eric Schliesser, 1–25. Oxford: Oxford University Press.

Benardete, Seth. 1991. *The Rhetoric of Morality and Philosophy: Plato's Gorgias and Phaedrus*. Chicago: University of Chicago Press.

Collins, James Henderson. 2015. *Exhortations to Philosophy: The Protreptics of Plato, Isocrates, and Aristotle*. Oxford: Oxford University Press.

Dodds, E. R. 1959. *Plato: Gorgias*. Oxford: Oxford University Press.

Fowler, Robert L. 1997. "Polos of Akragas: Testimonia." *Mnemosyne* 50: 27–34.

Guthrie, W. K. C. 1971. *A History of Greek Philosophy: Volume 3: The Sophists*. Cambridge: University Press.

———. 1975. *A History of Greek Philosophy: Volume 4: Plato, The Man and his Dialogues: Earlier Period*. Cambridge: Cambridge University Press.

Ioli, Roberta. 2013. *Gorgia: Testimonianze e Frammenti*. Roma: Carocci.

Irani, Tushar. 2017. *Plato on the Value of Philosophy: The Art of Argument in the Gorgias and Phaedrus*. Cambridge: Cambridge University Press.

———. 2021. "Socrates's Great Speech: The Defense of Philosophy in Plato's Gorgias." *Journal of the History of Philosophy* 59: 349–69.

Lattimore, Steven. 1998. *Thucydides: The Peloponnesian War*. Indianapolis: Hackett Publishing Company.

Moore, Christopher. 2019. "Review of Irani 2017." *Ancient Philosophy* 39, no. 1: 238–43.

———. 2020. *Calling Philosophers Names: On the Origin of a Discipline*. Princeton: Princeton University Press.

Munn, Mark. 2000. *The School of History: Athens in the Age of Socrates*. Berkeley: University of California Press.

Nails, Debra. 2002. *The People of Plato: A Prosopography of Plato and Other Socratics*. Indianapolis: Hackett.

Schollmeyer, Jonas. 2020. *Gorgias' ›Lobrede Auf Helena‹ Literaturgeschichtliche Untersuchungen Und Kommentar*. Berlin: De Gruyter.

Smith, C. F. 1919. *Thucydides: History of the Peloponnesian War*. Loeb Classical Library. 3 vols. Cambridge: Harvard University Press.

Strassler, Robert B. 1997. *The Landmark Thucydides. A Newly Revised Edition of the Robert Crawley Translation*. New York: Free Press.

Yunis, Harvey. 2007. "The Protreptic Rhetoric of the Republic." In *The Cambridge Companion to Plato's Republic*, edited by G. R. F. Ferrari, 1–26. Cambridge: Cambridge University Press.

6 Meanings of εἰκός in Plato's *Phaedrus*

Criticisms and Appropriations of a Rhetorical Device*

María Angélica Fierro

Introduction

It has been traditionally considered that, insofar as for philosophy's main concern that should be knowledge of objective truth, Plato had a visceral abhorrence of rhetoric because of its interest in just persuading on the basis of the mere "appearance of truth" and of sophistic skills, such as making the weaker argument appear the stronger. Thus, to this day, Ariston's son has carried on his broad shoulders the responsibility of an irreconcilable dispute between philosophy and rhetoric as well as of the "old contest" between philosophy and poetry. Along these lines it has been argued that in the *Phaedrus*,[1] in continuity with his developments in the *Gorgias*, Plato denies that rhetoric can be a technique or at least that, if it were a τέχνη, it should ultimately be reduced to dialectics (Guthrie 1971, 177; Murray 1988, 287, n.4; Vallejo Campos 2002). On this point Solana Dueso has written:

> Alongside the positive part, the essential pieces of Platonic philosophy which the term 'dialectic' embraces consists precisely in a refutation of a rival philosophy—the antilogy—of which rhetoric is the most important social manifestation. The fact that Plato writes in great detail about his method, the dialectic, in the *Phaedrus* is simply that it is the goal of the dialogue.
>
> (Solana Dueso 1994, 236; my trans.)

As for τὸ εἰκός, some authors such as Cole have considered that for Plato, differently from Aristotle's case, arguments based on it are "purely rhetorical in character" (1991, 96–97), while Yunis has pointed out Plato's approach to this rhetorical device in the *Phaedrus* as part of his hostility towards sophistic rhetoric as a whole (2011 *ad Phdr.* 272e1). Additionally, Gagarin (1994) has denounced the distorting nature of Plato's criticism of τὸ εἰκός, insofar as in the Athenian

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courts the contenders made their arguments based not only on plausibility but also on concrete facts.

Here, I intend to show that in the *Phaedrus* τὸ εἰκός is approached in a complex way where two meanings of this concept are involved:

a) On the one hand, εἰκός is taken in its ordinary sense of "what is plausible/probable/likely" to someone, including things which are plausible but contrary to what actually happens (Pl. *Phdr.* 273a–c). From this usual epistemic meaning of the term, Plato builds up a critical approach to it.
b) On the other hand, εἰκός can refer to something just *resembling* reality that the philosopher knowingly makes up in order to bring someone closer to the understanding of truth (273d–e). In this case Plato combines the usual epistemic meaning with its more etymological sense of "to be like the truth" along with a more explicit introduction of his own philosophical categories. Thus, τὰ δόξαντα are presented as opposite to the knowledge of the truth (260a); the rhetorical art of making ἀντιλογικοὶ λόγοι is described as a manipulation of what is similar and dissimilar to the truth; finally, knowledge of the truth is described as dialectical knowledge of reality, at different levels, and constitutes, then, the parameter for the construction of an εἰκός speech.

My proposal, then, follows the exegetical lines on the *Phaedrus* from authors such as North (1991)[2] who considers Plato as the first great theorist of rhetoric, Yunis (2005) for whom in this dialogue Plato is making the case for philosophy's absolute priority through the formulation of an absolute rhetoric, Centrone (2011) who, alongside Fedele (2011) and Murray (1988), claims that Plato actually formulates a new rhetoric which can be described as a positive form of ἀπάτη whose goal is to persuade someone of the truth when pure dialectical λόγος cannot fulfill this aim. Additionally, Pedersen's innovate approach to this dialogue should be mentioned, an approach in which he aims to overcome the hermeneutic dichotomy between "legitmate (Platonic) rhetoric" and "sophistic rhetoric" and interprets the *Phaedrus* as expounding the power of rhetoric and its ability "to shift a person's entire worldview" (Pedersen 2017, 14).

Two Meanings of εἰκός in Ancient Greek

The neuter perfect participle εἰκός, together with the masculine and feminine forms εἰκώς and εἰκυίας, as a resulting nominal formation of ἐοίκα, was related to one of the senses of this verb—"methinks, to seem to someone"—and so mainly meant "like truth" in the sense of "likely" or "probable." Derivatively, εἰκός was also applied more specifically in the intellectual and moral fields to refer to what is "reasonable" and "equitable." As all these uses of the term show the current meaning of this adjective always conveyed, then, something which someone has concluded as "probably true" and so referred to an epistemological state.[3] However, εἰκός also kept some connection with the meaning of "resemblance, likeness" which also belonged from its origins to ἐοίκα and was present as well

in other words that share the same root, such as the verb ἐικάζω ("to represent with an image") and the noun ἐικών ("image").[4] Through this last meaning of "resembling" εἰκός would allude to a factual status where the emphasis is put on both the analogous character of two things and the fact that one is "the real thing" while the other one is something εἰκός, i.e., something which is just *like* it; the epistemological sense of εἰκός would, then, come into play insofar as this relation of similitude between things is perceived, described, or created by someone.[5] In the following sections I aim to show that Plato makes use of these two meanings of εἰκός according to the requirements of the argument, the context, and the state of mind of the recipient (fictionally, Phaedrus, and indirectly, the reader). Thus, on the one hand, he leans on the current sense of "probable, likely" in order to represent the use of this term by sophists and orators while, on the other hand, he also takes into account the meaning of "like something, resembling," which the etymology of the term also suggests, in order to line it up with his own philosophical categories and transform it into a virtuous device to bring someone closer to the truth.[6]

Plato's Use of the Current Sense of εἰκός in the Phaedrus

The adjective εἰκός is frequently used throughout the *Phaedrus*. Given the careful design of each Platonic dialogue, all its occurrences might be significant, but I will take just three of them which I regard as particularly meaningful in relation to how Plato represents and appropriates its usual sense of "probable, likely" in order eventually to criticize the use of εἰκός as a rhetorical device and develop his reformulation of what εἰκός is, in relation to his own philosophical categories.

The clever explanations of the know-it-alls: εἰκός as what is "likely" but trivial

The first occurrence of εἰκός which I will consider takes place in the context of the so-called "Boreas and Oreithuia episode" (222b4–230a7) which belongs to the "Prologue" (227a1–230e5) of the *Phaedrus*. As some interpreters have suggested, the whole opening scene "serves as an inviting, witty, and eloquent introduction to the dialogue" (Werner 2012, 19) and actually works as a prelude where all the "themes" of the symphony—the text—are presented (Philip 1981). Plato's treatment of εἰκός in this passage can also be taken as one of these *leitmotifs*.

As has been pointed out (Ferrari 1987, 4–9; 234–235 n. 12),[7] here Socrates is ironically depicting as σοφοί the "new intellectuals," such as Lysias and the sophists in general whom Phaedrus uncritically admires because of their ability to build up clever arguments about any subject. In this portrayal of them, Socrates describes as τὸ εἰκός the kind of explanation which οἱ σοφοί would give about Boreas' abduction of Oreithuia as well as about other μυθολογήματα (mythic explanations). These learned men surely would reduce, he says, the mythical story according to which the princess, daughter of Erecteo, was kidnapped by the enraged god out of the violence of his sexual desire for her (Paus. 1.19; Hdt.7.189)

to a "likely/reasonable" elucidation of it: the strength of the northern wind pushed her into the rocks and so she died. Divergently, Socrates scorns these endless rationalizations of the mythical figures as just some kind of "clumsy wisdom" which is typical of a skillful, dedicated, but unfortunate man:

> **T1** [I]f someone is skeptical about these [*i.e.* the mythical explanations], and tries to reduce each to what is likely (προσβιβᾷ ἕκαστον κατὰ τὸ εἰκός), with his boorish kind of expertise (ἀγροίκῳ τινὶ σοφίᾳ), he' ll need a good deal of leisure. For myself, in no way do I have leisure for these things, and the reason for it, my friend, is this. I am not yet capable, in accordance with the Delphic inscription, of "knowing myself."
>
> (Pl. *Phdr.* 229e2–6)

To reduce—προσβιβάζειν—this mythical story κατὰ τὸ εἰκός would mean here to make a clever conjecture of what might actually happen to Oreithuia so that she found her death. Socrates declares that he has no time to elaborate this kind of explanation, not because they are more or less true, better or worse than a μυθολόγημα, but because he needs to devote himself to more serious matters, such as to know and to examine himself. So here, for the first time in the dialogue, the ἐικότα explanations of the know-it-alls are presented as trivial speculations in opposition to the inquiry into really serious issues such as self-knowledge. However, significantly, in the following lines Socrates expands this key idea of the dialogue, i.e., self-knowledge,[8] by making reference to another mythical character—Typhon (Hes. *Theog.* 869; Apollod. *Bibl.* 1.6.3)—for which he himself provides a rational explanation by decoding this μυθολόγημα in terms of whether he, Socrates, has a wild nature as this hurricane creature does or is rather like a mild, tamed animal. Thus, through the right use of a mythical figure such as Typhon, Socrates introduces the question about whether the human soul is "typhonic" and/or "untyphonic." This procedure anticipates his explanation of the complex structure of our ψυχή through something which it *resembles*, that is, the winged chariot (246a3–7: ἐοικέτω συμφύτῳ δυνάμει ὑποπτέρου ζεύγους τε καὶ ἡνιόχου). In this way, it is suggested that the right use of the ἐικών of Typhon can work as a suitable device in order to explain something truly important, such as what self-understanding of our human condition would be like.

From this passage it follows that Socrates is not interested in disqualifying "likely explanations" as such, nor in promoting naïve acceptance of the authority of traditional myths.[9] He discredits the εἰκός speculation of the know-it-alls about the abduction of Oreithuia by Boreas not because it is a "plausible" speculation, but because it refers to something not worth spending time on, such as the establishment of the historical truth of irrelevant events.[10] The fact that he himself bases his own explanation of what self-examination would be like on the resemblance between the human soul and Typhon suggests that his main concern lies in what kind of account can be more effective in making someone, in this case Phaedrus, reflect on something which truly matters, as in the nature of one's own soul. In other words, the use of myth as a form of ψυχαγωγία to lead

someone like Phaedrus to reflect on the nature of the soul is an open possibility for philosophical inquiry (Werner 2012, 41–42).

Lysias' ἐπίδειξις as the εἰκός speech of a rhetorician: the unsuitability of an "unlikely/likely" argument in form and content

One of the most characteristic devices of the forensic rhetoricians of the time seems to have been to write "likely" arguments in order to provide their customers with either a successful defense or a powerful prosecution for the trials they had to face at the Athenian Courts.[11] Plato's choice of Lysias as the representative of this kind of rhetoric seems to be due to the fact that he was one of the most recognized forensic authors of the time, and, in the dialogue, Phaedrus as a character offers the utmost expression of this general admiration for Lysias' writing skills.[12] Plato's reasons for attributing to him the *Eroticus*, which stands outside of the forensic subject matter that characterizes Lysias' production, must be found in the context of the dialogue.[13] On one hand, the attribution to Lysias of this kind of argument allows Plato to introduce the subject of ἔρως and to start the discussion about its ambiguous nature; on the other hand, it also makes it possible to open the discussion on the other major theme of the *Phaedrus*, namely the value of discourses in general and written discourses in particular, without restricting the discussion to forensic speeches. It must be noted that the term εἰκός in its current meaning of "likely, reasonable" is often used throughout this speech that Plato ascribes to Lysias. Thus the non-lover argues that:

a) It would not be εἰκός that the beloved would give away his sexual favors to a lover inasmuch as the lover will maltreat him as soon as he falls in love with someone else (231c7).
b) It is εἰκός that those in love would boastfully display their conquest while the non-lovers, who are in control of themselves, would act in the opposite way (231e4).
c) It is εἰκότως for the beloved to be afraid of someone who is in love with him inasmuch as he will act in a selfish way and harm the beloved (232c2).
d) It is not εἰκός that the non-lover will make his affection less when his sexual desires cease (233a2).

These occurrences of εἰκός in Lysias' speech do not seem casual insofar as his ἐπίδειξις is in fact a conspicuous example of how, thanks to rhetorical skills, something quite "unlikely" (such as a beautiful young man preferring to be intimate with a non-lover rather than a lover) turns out to be the most "likely" thing to do.

But Lysias' speech is not intended solely to provide a dramatic representation of the kind of "likely" arguments made by the rhetoricians of the time. It is also cleverly built up by Plato as an appropriate target for Socrates in his criticism of this type of argumentative construction both in its form and content. Thus in the first "Interlude," while Phaedrus claims to be absolutely amazed at Lysias' speech and declares that no other discourse could be better written than this one, Socrates

expresses his doubts about both its form (λέξις) and content (τὰ πράγματα) (235a). Regarding its λέξις the discourse is badly organized insofar as it states at the end what would be more appropriately put at the beginning, and repeats the same arguments over and over again. Regarding its reference to τὰ πράγματα Lysias' speech is also inadequate as it just makes random remarks, either true or false, about the lover's harmful effects on the beloved, and the non-lover's beneficial impact, without first stating what the nature of ἔρως is.[14] Socrates' First Speech works, then, as a first demonstration of what would be the most direct procedure in both respects, that is to say, to convey the truth through a proper dialectical argument with a definition of (part) of the real essence of ἔρως by an organized division into genera and species. However, afterwards, Socrates himself derives ἐξ εἰκότος (238e2) the likely good or bad consequences which will follow from this definition if the young boy chooses to be intimate with a lover. In addition to this, as shown above, Socrates has already made use of the mythical character of Typhon in order to nudge Phaedrus toward a first understanding of something really important, that is, self-knowledge; similarly, in his Second Speech, through a fantastic ἐικών of his own invention—the winged chariot—he will persuade and, at the same time, teach Phaedrus what the soul is "like" (see above; 113–114) and how its understanding is linked to other matters such as the divine side of ἔρως' nature, its cosmological scope, the soul's reminiscence of the eidetic realm, the possible interconnection between our incarnate existence and the disembodied state of our soul. In other words, Socrates will offer to his friend with whom he shares the madness about λόγοι an attractive speech which "resembles" the truth about important issues and, simultaneously, is credible to Phaedrus. Then, although a dialectical description of the nature of something would be the best, as far as it is possible, it is not the only way to communicate the truth: on occasion an explanation based on something "like the truth" can be more effective. The argument of Lysias is, then, condemned by Socrates mainly because of its shortcomings regarding its argumentative structure and the irrelevance of its content—not just for the εἰκός nature of some of its assertions.

The use of ἐικοὶ λόγοι at the Athenian courts: "likely" arguments as opposed to facts?

τὰ ἐικότα was a device for all kinds of rhetorical speeches; this we can deduce from Phaedrus' reference to it as one of the "refinements" which were mentioned in the books περὶ λόγων τέχνης (266d). However, as can be inferred from Antiphon's *Tetralogies*, the ability to make reverse probability arguments was especially essential for a successful prosecution in the Athenian courts. Plato does his own recreation of the forensic employment of ἐικοί speeches when Socrates gives a depiction of them in the following terms:

> **T2** For they [i.e., the forensic rhetoricians] say that in the law-courts no one cares in the slightest for the truth (ἀληθείας μέλειν οὐδενί) about these things, but only for what is convincing (τοῦ πιθανοῦ); and that is what is probable (τὸ εἰκός) […].

> For they go on to say that sometimes one should not even say what was actually done (αὐτὰ πραχθέντα), if it is improbable (μὴ εἰκότως), but rather what is probable (τὰ εἰκότα), both when accusing and defending, and whatever one's purpose when speaking, the probable (τὸ εἰκός) is what must be pursued, which means frequently saying goodbye to the truth (χαίρειν τῷ ἀληθεῖ).
>
> (Pl. *Phdr*. 272d7–e5)[15]

The argument from probability is attributed here to Tisias and, indirectly, to his teacher Corax, to whom the creation of the τέχνη of model speeches based on τὸ εἰκός is ascribed (*cf.* also Arist., *Rh.* 2.24.1402a17). However, as Gagarin (1994, 52) has pointed out, this extreme attribution to forensic rhetoricians of pursuing ἐικοί arguments and of disdaining the truth might be an invention of Plato himself or at least an exaggerated representation of their kind of performance, insofar as the claims at the courts sometimes were argued "not in likelihood but in fact" (οὐκ ἐκ τῶν ἐικότων ἀλλ' ἔργῳ, Antiph. *First Tetralogy* 2.4.8).[16] Notwithstanding, two considerations must be made about this passage: a) τὸ ἀληθές for which the orators do not care is τὰ πραχθέντα and factual truth has already been considered as irrelevant by Socrates; b) a "likely" explanation must not always be preferred, but only when a report of the real events sounds improbable (μὴ εἰκότως).

In any case, as shown in the next section, Plato's intentions seem to go beyond just presenting a distorting portrayal of the orators of his time inasmuch as, based on his own philosophical premises, he aims at both making a critical analysis of the use of εἰκός by the traditional rhetoric and, simultaneously, reformulating this device in order to transform it into one of the possible means to bring someone closer to the truth in a Platonic sense, that is to say, to the real essence of everything. This goal will also include extending the criticism and virtuous use of plausible arguments from the limited scope of the courts of justice (the only one imaginable by Phaedrus) to the use of language in general, both in oral and written form, in the public or private sphere, and whether performed by an expert or an amateur (Pl. *Phdr*. 261a; 261e).

Plato's Criticisms and Reformulation of τὸ ἐικός: A Philosophical Appropriation of Rhetorical Device

While Phaedrus can only conceive the employment of persuasive speeches in the political arena (261b), Socrates moves further and explores the possibility of a ῥητορικὴ τέχνη as a "universal art of discourse" (Yunis 2005, 103–104; see also White 1993, 179). Plato's movement to this wider and critical appraisal on this topic is also reflected in his approach to the ἐικός arguments which characterized the traditional rhetoric of his time.

The ἐικός as πιθανόν and δοξαστόν: What is "Likely" from an Epistemological Point of View

Insofar as in **T2** τὸ ἐικός is described as often opposite to the actual truth and at the same time as τὸ πιθανόν, Plato's recreation of the argumentative procedures at

the Athenian Courts makes the emphasis fall on the epistemological effect that the speeches should have on the jury, namely, on the fact that the arguments should be "credible" to them independently of the objective truth, and in that sense "likely."[17]

In order to achieve a better understanding of how τὸ ἐικός is associated with τὸ πιθανόν and a few lines later to τὸ τῷ πλήθει δοκοῦν (273b1), we must move back to an earlier section of the Second Part of the dialogue where Plato introduces τὸ δοξαστόν in order to analyze and criticize, from this philosophical category of his own, how logographers—but also orators, politicians, lawgivers, poets—conceive their mastery in the use of language. Thus, when Socrates claims that a mind which knows the truth (διάνοιαν ἐιδυῖαν τὸ αληθές) is a necessary requirement "in order to speak and write well (καλῶς λέγειν τε καὶ γράφειν)" about any subject, Phaedrus answers:

> **T3** What I have heard about this, my dear Socrates, is that there is no necessity for the man who intends to be an orator to understand what is really just (τὰ τῷ ὄντι δίκαια μανθάνειν) but only what would appear so to the majority (τὰ δόξαντα πλήθει) of those who will give judgement, and not what is really good or fine (τὰ ὄντως ἀγαθὰ ἢ καλά) but whatever will appear so (ὅσα δόξει); because persuasion comes from that and not from the truth (ἐκ τῆς ἀληθείας).
>
> (259e7–260a4)

Phaedrus' character, then, offers a description of the procedures of traditional rhetoric which he translates into Platonic terms:[18] the successful orator does not need to know how things actually are, but just what seems to be true to his listeners in order to persuade them and be able to manipulate their beliefs. As far as Socrates' previous remark is concerned, one might say that he is just distinguishing between the realm of thought and the realm of language by establishing that "the well-articulated speeches must contain the thought of the one who speaks and knows the truth" (Fedele 2011, 83; my trans.), without taking into account epistemological problems such as how to access the knowledge of truth. However, through Phaedrus' reply, the typical Platonic dichotomy between knowing "what 'really' is" (τῷ ὄντι ὄντως)—truth—and understanding "what appears to be" (τὰ δόξαντα)—non-truth—is already introduced, together with a concern for the essence of moral values such as what is just, beautiful, and good rather than for the veracity of specific events.

Through a funny example, Socrates brings to light why such lack of commitment to the truth is dangerous not only for the audience but even for the rhetorician himself in pragmatic as well as in moral terms. Thus, if the orator or one of his listeners were going to war on a mule based on the misconception that it has the qualities of a horse, he would be at higher risk of being caught and hurt by his enemy and of dying on the battlefield. However, as Socrates points out, it is even more dangerous for both the orator and his audience if they happen to have and share this kind of erroneous conception about notions such as what is "just," "unjust," "good," "bad," since their individual existences, as well as their community, might take an overall wrong direction. Then the good orator

should not make use of the beliefs of his audience in order to persuade them but needs as a minimum a right understanding about his subject matter and, above all, knowledge about the real essence of moral values in order not to inflict harm on them and also on himself (260b1–d2).[19]

Thus a first point of Plato's criticisms of sophistic rhetoric arises from holding that, according to his philosophical analysis, insofar as τὸ ἐικός can be identified with τὸ πιθανόν and τὸ δοξαστόν, persuasive arguments which are based on "the likely" cannot be part of good rhetoric since they would only take into account what seems to be the case to most of the people instead of knowing the truth. Thus these arguments have serious epistemological and moral shortcomings. On the other hand, it is stated that knowledge of the truth is a necessary requirement for rhetoric to be a τέχνη.

τὸ ἐικός and the ἀντιλογικοὶ λόγοι: The Successful Manipulation of what is Similar/Dissimilar to the Truth

A second step in Plato's philosophical criticism and appropriation of τὸ ἐικός takes place through his analysis of how "opposite speeches" are and should be formulated.

The ability to make ἀντιλογικοὶ λόγοι (opposite speeches) on any subject was also an essential element for success either in the Assembly or in private and public trials. Aristophanes' *Wasps* and *Clouds*, the anonymous *Díssoi lógoi* and again Antiphon's *Tetralogies* can be mentioned as examples of it. Socrates starts by describing the employment of opposite arguments in Athenian political life as "technically" (τέχνῃ) executed when someone makes "the same things appear (δοκεῖν) at one time good, at another the opposite," "at one time just, but at any other time […], unjust" (Pl. *Phdr.* 261c11–12; d3–4). So now the ability of producing τὰ δόξαντα in opposite ways, especially regarding moral values such as the good and the just, is somehow included in the art of rhetoric.

Socrates moves next to a more general reference to the use of ἀντιλογικοὶ λόγοι by the Eleatic Palamedes who could "make the same things appear like and unlike, one and many, at rest and in motion" (261d6–8). This allusion to Zeno's philosophical paradoxes, and perhaps internally also to Plato's *Parmenides*, broadens the scope of what the antithetical speeches could be about and paves the way to Plato's explanation of how opposite speeches are actually made and how they should be made. To this end he employs two of his more crucial philosophical categories: the similar and the dissimilar.

Thus, Socrates states that, if there were an ἀντιλογικὴ τέχνη, the man who possesses it should be able to proceed in relation to everything that is said as follows:

> **T4** [A] person will be able to liken (ὁμοιοῦν) everything to everything of the things that are able [to be likened to something] and to which things it is possible [for something to be likened] and [a person will be able] to expose when another person likens (ἄλλου ὁμοιοῦντος) [something to something] while keeping hidden [what he is doing, i.e., his use of the art].
>
> (261e2–3; trans. Yunis 2011, 186)

So rhetoric as the skill in the production of opposite speeches, which makes "appear" (δοκεῖν) one thing in one way and the opposite in another, is redescribed here in terms of "*likening* /*resembling* (ὁμοιοῦν) one thing to another," more precisely, of making use of "similarity" (ὁμοιότης) and "dissimilarity" (ἀνομοιότης) in dribs and drabs (κατὰ σμικρὸν) so that the audience does not notice that the rhetorician is doing so, especially in the case of things which are not distinctively different such as moral values. But if someone wishes to do this and to deceive the audience in an efficient way, without also producing self-deception, once again that person needs first to have knowledge of the truth, which here means more specifically to get "a precise understanding of the resemblance and dissimilarity of things that are" (τὴν ὁμοιότητα τῶν ὄντων καὶ ἀνομοιότητα ἀκριβῶς διειδέναι). By contrast, those who are ignorant of the truth and hunt appearances (ὁ τὴν ἀλήθειαν μὴ εἰδώς, δόξας δὲ τεθηρευκώς) will be unable to make such distinctions and so might fail in deceiving as well as in not being deceived themselves, especially if the object of discussion, such as moral values or love, is a controversial one. Thus the production of τὰ δόξαντα in the form of ἀντιλογικοὶ λόγοι is criticized only if someone does it randomly and is deprived of the knowledge of how far these speeches resemble the real thing.

Later on, through a fictional dialogue with Tisias, Socrates will say that he and Phaedrus have previously agreed that τὸ ἐικός "comes about in the minds of ordinary people because of resemblance to the truth (δι' ὁμοιότητα τοῦ ἀληθοῦς)" (273d3–4). If we read these words in the light of previous developments it can be said that τὸ ἐικός can be interpreted in epistemological terms as "what seems or appears to someone like," as well as in ontological terms as "what resembles or is like something."[20] Thus, two different kinds of rhetoric emerge from Plato's analysis so far. On one hand, there is the traditional rhetoric, which he criticizes for being unscientific in its making of opposite arguments, inasmuch as it randomly manipulates the beliefs of the majority and unknowingly produces simulacra which are taken by the hearers—and even by the rhetorician—for the real things; in this case the use of τὸ ἐικός is condemned. On the other hand, Plato depicts a new rhetoric according to which good orators will have an adequate comprehension of what is the case and of what is "similar/dissimilar" to it, i.e., what is "like" it, so that, on the basis of this right understanding they will be able to produce convincing "likely" arguments which present opposite views; here τὸ ἐικός is rehabilitated as far as it is subordinated to knowledge of the truth.[21]

Knowledge of the Truth and Appropriation of the ἐικός: The Rhetorical-Philosophical Construction of Something "Credible" and "Like the Truth"

The scope for the right production of something ἐικός and, more generally, for rhetoric being a τέχνη, is intrinsically linked for Plato, then, to knowledge of the

truth and of what resembles it, as Socrates asserts through his imaginary dialogue with Tisias:

> **T5** Tisias, we have for some time been saying […] that this "probability" (τὸ ἐικός) comes about in the minds of ordinary people because of a resemblance to truth (δι᾽ὁμοιότητα τοῦ ἀληθοῦς); and we showed only a few moments ago that in every case it is the man who knows the truth who knows best how to discover resemblances (τὰς ὁμοιότητας). So […] unless someone counts up the various natures of those who are going to listen to him, and is capable of dividing up the things that are according to forms and embrace each thing one by one under one kind, he will never be an expert in the science of speaking to the degree possible for mankind.
>
> (273d3–e3)

As Socrates points out here, knowledge of the truth[22] which is needed to produce something similar to it is not concerned with the accuracy or distortion in the report of actual facts, as might be the case with forensic rhetoric, but rather with the distinction according to forms and kinds about the subject matter to be developed and the kind of soul to be addressed.

The method through which knowledge of the truth can be attained as far as possible by a human being would be, then, dialectic, which in the *Phaedrus* has been understood as it is stated in this passage in the following ways:

1. The method of collection and division applied to the definition of Forms and the interconnection between them.
2. The method of collection and division applied to anything that can be unified under a universal concept and classified within a broader genus. As stated above (273e), dialectics would also include distinguishing, in addition to the Forms, the kinds of human soul and also the kind of speech appropriate for each kind of soul, and in a more general sense the provision of an organized speech and not a mere sum of parts.[23]

However, some interpreters have suggested that the main meaning of dialectic in this dialogue would be:

3. The reflective face-to-face exchange in the form of διαλέγεσθαι beyond dialectic in senses 1 and 2, both of which just consist in a τέχνη that organizes unreflective δόξα by providing as a context a collected field of objects which is afterwards organized through division (Griswold 1989, 173–186).
4. Any philosophical argument that makes it possible to think and speak orderly and correctly (259e) together with any articulation of multiple elements under any intelligible unity (Dixsaut 2001, 9; 103–132).

In fact, all these forms of dialectic can be recognized at different stages of the dialogue and the employment of one or the other depends on several factors, such

as the ontological status of the subject matter which is addressed, the state of mind of the interlocutor, and/or the range of scope which the discussion achieves. Thus, along the lines of what was previously said in the dialogue about the art of making opposite speeches, "similarity and dissimilarity" will need to be handled appropriately in order to proceed dialectically in any of these senses. As the *Sophist* makes clear, "identity and difference" together with "being" and "movement" are the μέγιστα γένη (Pl. *Soph*. 249d–259e) that transcend all the ontological levels and a right understanding of these meta-forms is required to distinguish between true and false judgments about anything and also to produce *knowingly* true as well as false judgments on any field. Thus Plato's conception of truth implies at any level to achieve, as far as possible, an *adequatio intellectus et rei* which can be expressed through language, although the ultimate foundation of any speech, including the accounts that appear in the *Phaedrus* itself, lies in the understanding of the structure of reality, i.e., the συμπλοκὴ ἰδῶν (*Soph.* 259e) from which everything derives its reality and on which language bases the adequate description of reality (Ackrill 1955; White 1993, 277–292).

However, even the *adequatio intellectus et rei* which is achieved through dialectics is just something ἐικός compared to two other ways of understanding "knowledge of the truth" that can be found in the *Phaedrus*:

5. Catching sight of the truest reality, that is, the *whole* eidetic realm, which is the truest kind of knowledge and is available only to the gods.
6. "Partially/hardly" (μόγις; *Phdr.* 247b and 248a; *cf.* also 249e; see Steinhal 1993, 101) catching sight of the Forms, especially of Beauty itself, which is the highest kind of knowledge available to human souls through a restrictive contact with the truest reality in their discarnate existence and through a process of ἀνάμνησις in our incarnate condition.[24]

But why would the philosopher, then, need to apply "similarity" and "difference" in order to produce something ἐικός, just "resembling the truth" instead of providing straightforward knowledge of the actual truth? The main reasons for doing so would lie in:

i. either the issuer's epistemic limitations; or
ii. the recipient's epistemic limitations and psychological characteristics; or
iii. the nature of the object to be explained.

Examples of these three scenarios can be found in the *Phaedrus* itself. I will address each kind of limitation separately, although they can interact and be combinable.

i

As is often stated in the dialogue, for a right and noble use of speech the issuer of it must be someone who knows the truth about the subject he is going to address.

Ideally this role should be assumed by a philosopher with dialectical knowledge whose object can be understood, as has been pointed out above, in different ways, namely:

- the ultimate principles on which all reality, including the Forms, is grounded;
- the Forms and the interconnection between them;
- something which is not a Form but can be unified under a universal;
- the rules for handling a discussion in such a way as to help to think and speak more and better about any issue.

In a more general sense, it could be said that acquisition of information about what someone intends to speak and persuade others about would be a necessary minimum requirement. However, even in the case of the best kind of dialectician knowledge of the Forms and/or the ultimate principles beyond them will be limited, restricted, since in their incarnate existence dialecticians can only reconstruct—remember—bit by bit the eidetic geography and represent it through the employment of thought and language. And as far as the attainable knowledge in both their incarnate and disincarnate existence, philosophers will only be able to grasp "partially" and "strenuously" the whole eidetic realm and barely express this experience due to the limits of human reason and verbal communication (see White 1993, 225). Thus even the highest kind of human knowledge would just *resemble* the direct and full grasping of the eidetic geography which can only be achieved by the gods (247e).[25] In this sense, the most knowledgeable productions of human thought and speech can be described as ἐικός compared with a complete and immediate access to true reality in both senses: it just resembles the noetic knowledge of the gods and is a likely reconstruction of such knowledge.[26]

ii

As for the limitations concerning the recipient, the wise author of the speech needs to evaluate what kind of λόγος is appropriate according to the epistemic level and psychological characteristics of the person being addressed, that is to say, to take into account the auditor's "psychagogic" conditions for the speech's performance, particularly the auditor's erotic disposition (Yunis 2005, 117–121). Ideally, the recipient must be an individual, as the conversations between Socrates and someone else as are portrayed in the Platonic dialogues; however, similar considerations can also be applied to the case of a wider audience, although the results might not be equally successful. Taking all these factors into account the rhetorician-philosopher will decide how to create the best ἐικός speech for that soul and, little by little, manipulate it by the employment of similarity and dissimilarity in order to draw that person as far as possible to the understanding of the actual truth. Thus, in the case of someone like Phaedrus, who is just uncritically repeating out of admiration whatever he hears from some famous rhetoricians such as Lysias, Socrates replies by producing his First Speech in which

he starts to introduce some rationale in form and content[27] and thus calls into question Phaedrus' unreflecting δόξα (see Fedele 2011, 77). Then, in his palinode, Socrates, on one hand, will take care to deliver something which seduces Phaedrus' ποικίλος soul (256e) and, on the other hand, will provide some key philosophical concepts which are presented as an organized whole through the myth of the winged chariot, either because a full explanation of them is not possible at the moment (see 113–114, above, and n.8), or because only some general speculation is possible as will be shown in (iii). Instead, in the Second Part of the dialogue, Phaedrus' soul seems to be ready for a different kind of speech and so Socrates will mainly apply dialectics in the different ways mentioned above and even take Phaedrus to have a first understanding of the nature of the dialectical method itself in terms of right collections and divisions. In other words, unless a dialectical explanation in some of the senses pointed out above can be provided, the philosopher will knowingly build up a δόξα which is founded on the best possible grounds in order to bring someone closer to the truth. Thus, through the analysis of τὸ ἐικός according to Plato's philosophical categories it is possible to distinguish between, on the one hand, a δόξα which is a random, unfounded understanding just based on sense-perception and common sense and is reproduced by sophistic rhetoric in its ἐικοί speeches and, on the other hand, the δόξα as something which the really skillful rhetorician (the philosopher) can bolster, challenge and/or rebuild in the minds of the listeners through an ἐικός speech which resembles the truth thanks to the philosopher's knowledge about the subject matter, the kind of psychological disposition of the auditors, and the kind of speeches appropriate to each soul and circumstance.

iii

Sometimes, due to the limitations of human understanding, purely dialectical argument is just not possible about certain topics and only an account of what would be likely can be given in relation to them. This is especially the case with Plato's eschatological myths: given that nothing certain can be stated about the *post-mortem* life, just some reasonable general assumptions about the afterlife condition of the soul can be expressed through an imaginative narrative which resembles, somehow, what that condition might be like. Thus, this kind of myth in particular aims at both arousing and controlling the desires, emotions, and appetites of the audience's soul (Yunis 2005, 112)—in other words, at enchanting and soothing "the fearful child within us" (*Phd.* 77e5; Vallejo Campos 2005, 128)—and at suggesting, according to a previous rational analysis,[28] the best possible hypothesis about the afterlife integrated through the imagery in an overall picture which challenges our ordinary understanding of ourselves and reality.[29] In this sense it is possible to say that the myth of the winged chariot in Socrates' Second Speech provides, among other things, an ἐικός representation of this eschatological dimension concerning the itineraries of human souls in their disincarnate and incarnate condition within the framework of cosmic justice. The fantastic journey of the divine winged chariot-souls above the heavenly realm of

the Forms and the strenuous, sometimes hopeless, effort to follow them with our "human too human" chariot, tries to offer a synthetic account which resembles the essential truth regarding our present condition with its projection into a wider, transcendental scope and, at the same time, its overwhelming imagery intends to subdue our ἔρως by seducing us and directing it towards the best possible goal (Fierro 2015). As Yunis suggests, the tremendously imaginative account of the palinode would be quite "unlikely" in the traditional sense of ἐικός but is a good resemblance of the truth that matters to Plato (2005, 116), that is to say, the essence of what we are and of reality as a whole. Its very implausibility from an ordinary point of view seems to intend to inspire desire for beauty and understanding of its meaning and, at the same time, to bewitch the "many-colored" part of our soul. That is also probably why Socrates states on the speech in which the argument for the immortality of the soul together with the apotheotic myth are about to be developed: "The proof will be disbelieved (ἄπιστος) by the clever (δεινοῖς), believed (πιστή) by the wise (σοφοῖς)" (Pl. *Phdr.* 245c1–2).

Conclusions

To sum up: in the first place I have examined how the term ἐικός is used in its current meaning of "likely, probable" in the *Phaedrus*. I have shown that it can refer to trivial explanations such as the endless and irrelevant intellectualization regarding traditional mythical accounts as it is in the case of the story about Oreithuia's abduction by Boreas. Lysias' speech also works as an example of how sophistic rhetoric can argue in a "likely" way the quite "unlikely" case that a handsome young boy should choose as his mate someone who does not love him rather than someone who loves him. The *Phaedrus* also depicts how forensic rhetoric made use of reverse probability arguments which often contradicted the actual facts. However, even in these cases, the ἐικότα explanations are not rejected in absolute terms. Socrates makes use of the myth of Typhon and decodes it for the elevated purpose of showing the importance of self-knowledge. In addition to this, although he plays off his own dialectical account of love against Lysias' random, likely assertions about it, he also draws ἐξ ἐικότος, according to his definition of ἔρως, the bad consequences for the beloved one who chooses to be intimate with a lover. Moreover, factual truth which forensic rhetoric despises is actually uninteresting for Socrates who, rather, cares for the essential truth, for example, about the real nature of his soul.

Second, I have shown how Plato employs his philosophical categories in order to criticize, analyze, and reinstate this rhetorical device as a powerful tool for a noble and good production of speeches not only in the political sphere but in any cultural activity, especially in the philosophical field. A first Platonic turn of the screw takes place when Socrates identifies τὸ ἐικός with τὸ πιθανόν and τὸ δοξαστόν and argues that inasmuch as speeches based on "the likely" only take into account what seems to be the case to most of the people instead of knowing the truth, they have serious epistemological and moral shortcomings and cannot be part of good rhetoric. A second Platonic maneuver which occurs when he bases

rhetorical efficacy in the production of "opposite arguments," that is, arguments about similarity (ὁμοιότης) and dissimilarity (ἀνομοιότης), intending to deceive the interlocutor about the truth. And here, of course, the speakers themselves need to know the truth about the subject matter (*Phdr.* 261e2–262a8). Thus, τὸ ἐικός is associated not only with what is credible to most people, in its usual meaning of "likelihood," but also with its meaning of "likeness"—the likeness of the resemblance to that which it resembles. Finally, insofar as the right use of this rhetorical device requires the speaker to know the truth, the Platonic appropriation and use of τὸ ἐικός becomes dependent on the kind of knowledge at stake (a grasp of the ultimate principles of reality, or, at least, a comprehension of whatever the subject matter is) as well as on the audience's readiness and ability to understand the truth (273d3–e3). Thus, if the issuer of the speech knows the truth because of attaining dialectically either a grasp of the ultimate principles of reality (including the Forms and the interconnection between them), or, at least, because of a comprehension of whatever the subject matter is which can be unified under a universal, or, in a more general sense, the possession of the best information about it, the knowledgeable speaker might choose not to impart the straightforward truth to the audience but to present a likely explanation which resembles the real thing in order to persuade the auditors and, if possible, gradually lead them to a better and higher comprehension of the truth. However, on some topics, such as the afterlife of the soul, only an ἐικός account would be possible. In addition to this, inasmuch as human dialectical knowledge just *resembles* the full noetic knowledge of the eidetic realm which is only available to the gods, the face-to-face dialectical exchange, and the Platonic dialogues as an image of it, should be considered as something ἐικός in comparison to divine wisdom in both senses: as the most "likely" rationale about this highest and truest kind of knowledge and as the most resembling representation of it.[30]

Notes

1 For the Greek texts I follow the *TLG*'s editions which for Plato is the OCT by Burnet (1900–1907); for the *Phaedrus* I have used Rowe's translation (1986) unless otherwise indicated and taken into account my translation into Spanish (Fierro, 2022); for the rest of the dialogues I have employed the edition by Cooper (1997).

2 Brady also reconstructs a possible Platonic defense of rhetoric after she outlines the main lines of Plato's criticisms to it in the *Gorgias* and the *Republic* (2002, 8–14).

3 On what follows in this section see *LSJ s.v.* εικός and ἐοίκα and Bailly (2000) s.v. *ἐίκω. Based on its current sense, Aristotle will use it in order to refer technically, from a logical point of view, to what is just probable as opposite to what is necessary (e.g., *An. pr.* 70a4 and *Rh.* 1357a34).

4 For the purpose of the present work, I distinguish just these two meanings of εικός but its etymology is quite complex as can be seen in Chantraine (1968) *s.v* ἐοίκα.

5 A reunion of both senses of εικός can be found in its translation by Spanish *vero-símil*, Italian *vero-simile*, or French *vrai-semblable* which might refer to what is similar to what is real as well as what seems likely or probable.

6 Along similar lines, according to Des Places the adjective εικώς in Plato's works needs to be understood in three senses: a) "ressemblant"; b) "naturel, raisonnable"; c) "vraisemblable," while as a noun τὸ εικός would usually mean "vraisemblance" (1964, s.v. εἰκώς).

7 So here σοφός describes someone able to express himself "cleverly" (σοφιζόμεος, Pl. *Phdr.* 229c7) such as these "know-it-alls" (*cf.* also 258a8; 260a6; 267b6; 273b3). However, in a more Platonic sense, σοφός refers to those who have full knowledge of the Forms, that is, the gods (278d3–6); παλαίοι σοφοί such as Anacreon and Sapho (235b6; *cf.* also 244b6–7 and 274c1–2) are also presented as people really wise in contrast to the "new intellectuals" who just pretend to be wise.

8 Self-knowledge is undoubtedly one of the main topics which runs across the dialogue. In fact, for some authors, it is actually the foremost theme that interweaves the whole text of the *Phaedrus* (Griswold 1989, 2–9).

9 As Werner suggests, the point in this passage is that "self-knowledge should be our true concern, and not the attempt to verify or rectify myth" (2012, 41).

10 Socrates' topographic remarks about the possibility that Oreithuia's abduction could have taken place from the Areopagus and not in the vicinity of where they are shows that he is "aware of the contingent limitations on our knowledge of historical truth" (Ferrari, 1987, 11). On the other hand, he considers anyway speculations about this kind of event as a worthless business since he is interested in universal truths about important issues such as knowing oneself.

11 On the context and the utilitarian purpose of forensic speech writing in the time of Lysias, see the classic work by Lavency (1958). As Kennedy has already pointed out, the use of "probability" arguments was one of the characteristic features of this kind of rhetoric (1963, 32), although authors like Gagarin (1994) consider it one of Plato's distortions of the actual performance by earlier and contemporary rhetoricians.

12 In the first century BCE, Dionysius of Halicarnassus in his *On the Ancient Orators* IV.2. mentions Lysias as an excellent example of the purest Attic prose. At 228a 1–2 Phaedrus describes Lysias as "the δεινότατος of present writers."

13 On the discussion on whether the *Eroticus* would have been actually written by Lysias or is rather a parodic Platonic invention, see, e.g., Dover (1968), De Vries (1969), and Rowe (1986). I have a preference for the second interpretation as Lysias' speech fits so well with its use by Plato in different parts of the dialogue.

14 However, perhaps the greatest shadow of suspicion on the truth value of Lysias' speech lies in that the issuer of it is in fact a cunning lover instead of a non-lover who just tries to persuade the handsome boy χαρίζεσθαι him (237b3).

15 The example which Socrates attributes to Tisias, who was considered, together with his teacher Corax, the founder of forensic rhetoric runs as follows: if a weak but brave man beats a strong but cowardly man and steals his cloak and both of them are taken to the law-courts, neither party should speak the truth but lie (273b–c).

16 Arist., *Rh.* 2.24.1402a17 actually seems to echo *Phdr.* 273b–c. At *Rh.* 2.24.1400b1 Aristotle describes Theodorus' use of εἰκός in similar terms to what he says about Corax. At *Phdr.* 267a it is stated that not only for Tisias but also for Gorgias τὰ ἐικότα should be given precedence over truths. On Gorgias' association with Tisias *vid.* Preus (2017).

17 In *Gorgias* the pair ἐικός-πιθανόν speech is also presented as a synthesis of the ideal of traditional rhetoric through the character of Callicles (Pl. *Grg.* 486a2).

18 Fedele regards Plato's treatment of rhetoric here as an "arbitraria riduzione […] nella δόξα della folla" (Fedele 2011, 79). However, it is not exactly arbitrary but aims at a critical analysis by Plato's employment of his philosophical categories.

19 A similar criticism to sophistic rhetoric can be found in the *Gorgias* insofar as in that dialogue Socrates also condemns "the persuasion that arises from manipulating the beliefs of ignorant masses (*Grg.* 454e-459c) and the harm that is inflicted by politicians who use such rhetoric (*Grg.* 463c-465e, 502d-520b)" (Yunis 2011 *ad Phdr.* 260c7–d1).

20 On how Plato treats μίμησις in a similar way *vid.* Halliwell (2002, 37–48), Janaway (1995, 69–73), and Marcos (2006, 74–88).

21 Similarly, Centrone distinguishes two meanings of ἀπάτη in the *Phaedrus*: a) "deception" in the negative sense of leading someone into falsehood; b) "diversion" in the

positive sense of moving someone away from a wrong view towards beliefs more similar to the truth (2011, 45–46). *Vid.* also, Murray (1988, 279–289) on how a "true/philosophical art" may employ opposite arguments and Fedele (2011, 75–92) on how Socrates himself applies to his own speeches this technique in the *Phaedrus* to make opposite discourses.

22 On what this knowledge involves in Plato, see Halliwell 1994, 233.

23 On Plato's different approaches to the concept of "dialectics" *vid.* Hackforth (1952, 136).

24 On the similarity between the ἀνάμνησις in Socrates' Second Speech and the description of dialectic *vid.* Griswold (1989, 111–121). Only when a philosopher falls in love and contemplates his beloved one's beautiful face or body which imitates well beauty itself (κάλλος εὖ μεμιμημένον, 251a), he recollects it immediately, although he cannot clearly explain what is happening to him (249d–251a).

25 In addition to this, the best sort of written speech can only be an image (εἴδωλον) of oral dialectical discussion as it is suggested through the criticism of writing (276a).

26 Along these lines, the written speech is considered just an εἴδωλον of the live activity of διαλέγεσθαι (276a; Griswold, 1989, 178), "a simulacrum of philosophical discourse" (White 1993, 179).

27 He organizes his speech by applying the method of "division" and "union" in order to distinguish different types of ἐπιθυμία and to get a first definition of ἔρως from which he deduces the (bad) consequences of the lover's actions on the beloved one.

28 *Vid.* Vallejo Campos (2005, 130 nn. 28 and 29) about some exegetical lines which advocate for a rationale behind the eschatological myths.

29 The Platonic myth does not promote a passive attitude in its recipients, but active reflection which takes the listeners to a more transcendental comprehension of themselves and of reality (Griswold, 1989, 147–156; *contra* Vallejo Campos, 2005, 131).

30 Similarly, Centrone states: "É dunque possibile interpretare molti dialoghi come esempi di retorica filosófica […] nel senso cioè di uno sviamento che avviene a piccoli passi, di un 'inganno' positivo orientato alla conversione dell'interlocutore" (2011, 54–55).

Bibliography

Ackrill, John Lloyd. 1955. "ΣΥΜΠΛΟΚΗ ΕΙΔΩΝ." *Bulletin of the Institute of Classical Studies* 2: 31–35.

Asmis, Elizabeth. 1986. "*Pyschagogia* in the *Phaedrus*." *Illinois Classical Studies* 11: 153–72.

Bailly, Anatole. 2000. *Dictionnaire grec-français*. Paris: Hachette.

Brady, Michelle. 2002. "A Platonic Defense of Rhetoric." *Mediterranean Studies* 11: 1–18.

Burnet, Ioannes. 1901. *Platonis Opera*. Vol. 2. Oxford: Oxford University Press.

Centrone, Bruno. 2011. "*Fedro* 261e7-262c4, o l'inganno de la buona retorica." In *Il Fedro di Platone: struttura e problematiche*, edited by Giovanni Casertano, 39–56. Napoli: Loffredo.

Cerri, Giovanni. 1991. *Platone sociologo della comunicazione*. Milano: Il Saggiatore.

———. 2007. *La poetica di Platone: una teoria della comunicazione*. Lecce: Argo.

Chantraine, Pierre. 1968. *Dictionnaire étymologique de la langue grecque. Histoire des mots*. Paris: Klincksieck.

Cole, Thomas. 1991. *The Origins of Rhetoric in Ancient Greece*. Baltimore: The John Hopkins University Press.

Cooper, John, ed. 1997. *Complete Works*. Indianapolis: Hackett.

Des Places, Édouard. 1964. *Platon. Oeuvres Complètes. T. XIV. Lexique de la langue philosophique et religieuse de Platon*. Paris: Les Belles Lettres.

Dixsaut, Monique. 2001. *Les metamorphoses de la dialectique dans les dialogues de Platon*. Paris: Vrin.

Dover, Kenneth. 1968. *Lysias and the corpus Lysiacum*. Berkeley and Los Angeles: University of California Press.

Fedele, Angela. 2011. "Processo alla retorica per il giovane Fedro: un tentativo di persuasion 'verosimile'." In *Il Fedro di Platone: struttura e problematiche*, edited by Giovanni Casertano, 75–94. Napoli: Loffredo.

Ferrari, Giovanni. 1987. *Listening to the Cicadas: A Study of Plato's Phaedrus*. Cambridge: Cambridge University Press.

Fierro, María Angélica. 2015. "The Myth of the Winged Chariot: A Vehicle for Philosophical Thinking." In *Plato's Style and Characters: Between Literature and Philosophy*, edited by Gabriele Cornelli, 47–62. De Gruyter: Berlin.

———. 2022. *Platón.Fedro*. Buenos Aires: Colihue.

Gagarin, Michael. 1994. "Probability and Persuasion: Plato and Early Greek Rhetoric." In *Persuasion: Greek Rhetoric in Action*, edited by Ian Worthington, 46–68. London: Routledge.

———. 2002. *Antiphon the Athenian: Oratory, Law and Justice in the Age of the Sophists*. Cambridge: Cambridge University Press.

Guthrie, William Keith Chambers. 1971. *The Sophists*. Cambridge: Cambridge University Press.

Griswold, Charles. 1989. *Self-Knowledge in Plato's Phaedrus*. New Haven: Yale University Press.

Hackforth, Reginald. 1952. *Plato's Phaedrus*. Cambridge: Cambridge University Press.

Halliwell, Stephen. 1994. "Philosophy and Rhetoric." In *Persuasion: Greek Rhetoric in Action*, edited by Ian Worthington, 222–43. London: Routledge.

———. 2002. *The Aesthetics of Mimesis: Ancient and Modern Problems*. Princeton: Princeton University Press.

Janaway, Christopher. 1995. *Images of Excellence*. Oxford: Clarendon Press.

Kennedy, George A. 1963. *The Art of Persuasion in Greece*. Princeton: Princeton University Press.

Lavency, Marius. 1964. *Aspects de la logographie judiciaire attique*. Louvain: Édition Nauwelaerts.

Marcos, Graciela. 2006. "Algunos aspectos de la crítica platónica al arte. La analogía entre el sofista y el pintor." *Hypnos* 16: 74–88.

Murray, James. 1988. "Deception, and Dialectic: Plato on the True Rhetoric ("Phaedrus" 261–266)." *Philosophy & Rhetoric* 21, no. 4: 279–89.

North, Helen. 1991. "Combing and Curling: *Orator Summus* Plato." *Illinois Classical Studies* 16, no. 1/2: 201–19.

Pedersen, Stephen M. 2017. "A Composed 'Rhetoric' in Place: A Material-Epistemic Reading of Plato's *Phaedrus*." *Rhetoric Review* 36, no. 1: 1–14.

Pendrick, Gerard. 2002. *Antiphon the Sophist: The Fragments*. Cambridge: Cambridge University Press.

Philip, A. 1981. "Récurrences thématiques et topologie dans le *Phèdre de Platon*." *Revue du Metaphysique et de Morale* 86, no. 4: 452–76.

Preus, Anthony. 2017. "Philosophy and Rhetoric in Western Greece: Focus on Empedocles and Gorgias." In *Politics and Performance in Western Greece*, edited by Heather Reid, Davide Tanasi, and Susi Kimbell, 197–204. Sioux City: Parnassos Press.

Rowe, Christopher. 1986. *Plato: Phaedrus*. Warminster: Aris & Phillips.

Schiappa, Edward. 1990. "Did Plato Coin *Rhetorike*?" *American Journal of Philology* 111: 457–70.

Solana Dueso, José. 1994. "Retórica y dialéctica: la disputa sobre la unidad del *Fedro*." *L'Antiquité Classique* 63: 231–36.

Steinthal, Hermann. 1993. "μόγις und ἐξαίφνης. Platon über die Grenzen des Erkennens." In *Antike Texte in Forschung und Schule. Festschrift für W. Heilmann zum 65. Geburstag*, edited by Christoff Neumeister, 99–105. Frankfurt am Main: Diesterweg.

Vallejo Campos, Álvaro. 2002. "Razón, seducción y engaño en la retórica antigua: la crítica platónica." *Biarte*, 27: 23–43.

———. 2005. "Escatología y retórica en los diálogos platónicos." *Revista de Filosofía* 30, no. 1: 117–34.

Werner, Daniel. 2012. *Myth and philosophy in Plato's Phaedrus*. Cambridge: Cambridge University Press.

White, David. 1993. *Rhetoric and Reality in Plato's Phaedrus*. Albany: SUNY Press.

Yunis, Harvey. 2005. "Eros in Plato's *Phaedrus* and the Shape of Greek Rhetoric." *Arion*, 3rd ser., 13, no. 1: 101–26.

———. 2011. *Plato: Phaedrus*. Cambridge: Cambridge University Press.

7 Consuming Knowledge*

Anne Ashbaugh

Words nourish souls. Words also harm souls. If sufficiently persuasive, words consume souls. Emphatically, Socrates warns his young friend, Hippocrates:

> So, if you are a knowledgeable consumer, you can buy teachings safely from Protagoras or anyone else. But if you are not, please don't risk what is most dear to you on a roll of the dice, for there is a greater risk in buying teachings than in buying food.
>
> (Pl. *Prt*. 313e-314a)[1]

In particular, it is the soul's reasoning faculty that either consumes or is consumed by accounts.[2] Given the immediacy with which accounts enter a soul, the problem of consuming knowledge antecedes the need to determine which accounts nourish and which poison, or the need to profit from the first and reject the second. Before such determinations, inquirers must learn to consume knowledge without being consumed by persuasion. Minimally, this requires distancing. At a distance, without appropriating claims or letting them settle, knowledge claims may be tested. Plato's dialogues present a rich variety of examples. Plato's *Protagoras*, for instance, considers the very issue of consuming knowledge while simultaneously creating a space for doubt that facilitates appropriate consumption. Early in the dialogue, Socrates[3] and his young friend, Hippocrates, consider the difficulties involved in consuming knowledge. During the discussion, Socrates provokes questions and awakens doubt in his interlocutor by debating the merits of young Hippocrates' desire to purchase knowledge from Protagoras. Socrates approaches the matter carefully. He asks the young man a series of questions that induce him to look into his motives and to admit that seeking instruction from Protagoras is tantamount to wanting to become a sophist. The realization not only curbs young Hippocrates' enthusiasm, it also makes him blush, giving Socrates an opening to appeal to Hippocrates' spiritedness by asking him: "What? You? Wouldn't

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you be ashamed to present yourself to the Greek world as a sophist?" (Pl. *Prt*. 312a). Once Hippocrates admits he would be ashamed, Socrates gives him a way to preserve his dignity by suggesting that maybe Hippocrates expects to receive from Protagoras "a general education suitable for a gentleman" (312b).

Alerted to the dangers of entrusting himself to a sophist but no longer ashamed, young Hippocrates is ready to inquire further into consuming knowledge. Dramatically, in word and deed, the dialogue demonstrates how consuming knowledge harms the least when accompanied by inquiry into oneself and into one's assumptions. Testing not only beliefs about sophists but also Hippocrates himself, Socrates maintains a virtuous level of knowledge consumption during his conversation. Later in the dialogue, in Callias' house, Socrates' scrutiny of his own and Protagoras' claims proceeds using the same method of question and answer that worked so well with Hippocrates. When Socrates called for examining teachings before consuming knowledge, he may have had the elenchus in mind since short utterances reduce exposure and questions delay belief. I suspect that the closest analog of a container for teachings, or at least one good way to keep teachings at bay, is testing teachings by questioning those who propound them (elenchus). The dialogue form nicely fits that method of inquiry. Sometimes Socrates' interlocutors provisionally adopt a claim that Socrates presents for examination and sometimes the interlocutors present a remembered view for questioning. In some dialogues, Socrates himself makes a teaching available for shared scrutiny. Regardless of their source, claims come under scrutiny and more often than not are rejected.

A prime example of a bad consumer of knowledge is Meno, whose memory is packed not only with Gorgias' teachings but with bits and pieces of quotations from famous people (*Meno* 70b–c, 80d). With Meno and with similarly afflicted interlocutors, Socrates must continue inquiring until the interlocutor turns inward and admits ignorance. In most instances, interlocutors who think they know something but do not know it reached that state of self-ignorance by consuming knowledge without testing the teachings, without dialogue or elenchus. Socrates, on the other hand, is most of the time ascetic about assent, careful about accumulating teachings, and keenly aware of his ignorance. The latter is crucial because when we think we know, we stop searching and because when we think we know but do not know, we lack self-knowledge.

The purpose of learning to consume teachings is twofold: (i) to deflect the influence of teachings not yet tested and (ii) to allow inquirers to determine for themselves the likelihood of claims. The first secures the virtuous exercise of reason, and the second ensures the epistemic agent's autonomy.[4] The need to deflect the impact of words is straightforward and relates directly to human vulnerability to language. Anyone familiar with court proceedings in the United States, for instance, has also wondered precisely how jurors are supposed to erase from their thinking those portions of a testimony that a judge orders them to ignore. The words may be easily omitted from a written version of the testimony, but what possible devise would equally remove the words and their effects from the minds of those who must decide the verdict? Most often, the portions to be

removed are rendered doubtful by wise barristers and the use of any argument that relies on the deleted information disallowed among the jurors.

All is not lost for someone who succumbs to teachings, however. Phaedrus, in the dialogue named after him, exemplifies someone consumed by Lysias' teachings on love. Persistent questioning with Socrates finally induced Phaedrus to waken himself from Lysias' spell. Socrates employed an array of philosophical and literary devices including an imitation of Lysias, offering counter teachings, renouncing them, denouncing and embracing rhetoric, and simply using all means at reason's disposal to battle a self-deceptive degradation of *eros*. For his part, Socrates admits to having a passion for speeches that occasionally backfires. For instance, at the end of Book I of the *Republic* Socrates attributes the derailment of his inquiry into justice to having acted like gluttons at a feast who consume every dish passed to them. Socrates entertained every claim handed to him before completing a full examination of the initial question (*Resp.* 354b). As a result of having neglected the central inquiry into what justice is, Socrates confesses that his conversations with Cephalus, Polemarchus, and Thrasymachus left him ignorant. Yet, he clearly and carefully investigated each proposed definition of justice disallowing any to take root in his soul prematurely. What, then, was the problem? He searched for justice not following a measured, rational process but as people driven by appetites crave food. That is, he desired knowledge as an intemperate appetite desires its object. One problem with this confusion of desires is that appetites crave only from a sense of lack or emptiness, but reason desires both from lack and from fullness, e.g., preserving knowledge to attain knowledge (see also *Symp.* 211d–212b). An even larger problem concerns justice, the soul's virtue (*Resp.* 353c).[5] Justice requires harmony among the parts of the soul and excellent desiring by each part according to its virtue or excellence, that is, desiring physical pleasures in moderation, desiring victory and honor courageously, and desiring knowledge wisely, each power according to its desired object. If the reasoning power starts desiring knowledge as appetites desire food, then, in the confusion, reason will neither govern itself nor the other modes of desiring and disproportion will ensue (*Resp.* 443c–d). Using the division of the soul in the *Republic* as a heuristic device, the importance of desiring knowledge rationally as well as the need for reason's autonomy can become clearer.[6]

Taking humans to be desirers and the three desiring powers of the soul presented in the *Republic* as three possibly exhaustive sources of human desires, we see the importance of not mixing modes which are fundamentally in conflict with each other, each pulling to drive a person to what each quite naturally seeks. The divided self, like the city it resembles, requires a ruler. However, only that desiring power capable of virtuously satisfying its own and the desires of the others, without causing harm to itself or the others, qualifies as the proper ruler. The appetites, focused as they are on physical pleasures and money, would disfigure spiritedness (θυμός) by thwarting the latter's desire for honor, victory, and fame. Spiritedness, in turn, could subvert appetitive desires for the sake of achieving fitness to win in battle.[7] Reason's desire for knowledge, too, would wreak havoc were it allowed free rein. Turned outwardly and driven by an external object, reason may become

just as insatiable, and lead inquirers into multiple pitfalls. For example, inquirers might foolishly ruin their health to obtain information (this harms the appetitive faculty), falsify information to obtain research grants (reason's self-harm), or even seek fame more earnestly than knowledge (self-harm and harm to θυμός).[8] However, when people turn inquiry inwardly and satisfy their desire to know by pursuing self-knowledge, reason could become a fitting ruler and one that ensures the optimum functioning of each desiring power mentioned or any others that may surface through inquiry.[9] A reason-ruled person thrives on acting justly, combining all three desiring powers so that a person, "from having been many becomes entirely one, temperate and harmonious" (*Resp.* 443d–e). Importantly, Socrates notes that it is out of this level of integrity secured by reason's rule that the just person pursues money or other appetitive ends as well as fitness or political action (443e). The context of the discussion examines the governance of the self that results in just actions, but it also shows the importance of having reason harmonize with all desires even as it satisfies its desire for knowledge with self-knowledge. Such a shift in the consumption of knowledge matters both for inquiry and for self-governing.

What powers does reason have for inquiry and for self-governing? Another image from the *Republic* clarifies both the extent and the power of reason (509d–513e). Taking at face value a baffling geometric metaphor, the divided line, we could say that reason (λογιστικόν) is a complex of proportionately interrelated cognitive elements each supporting a cognitive aspect and enabling reason to pursue its object while governing the soul. Supposing reason to possess the powers to imagine, perceive and trust its perceptions, think and understand, we may grasp how reason can govern itself and other desiring powers. Imagination and perceptual trust (πίστις) grasp sensible things in their interrelations and allow reason to relate to the two other sources of desire in the soul that reason must govern, i.e., spiritedness and appetites. Likewise, imagination and perceptual trust enable reason to pursue self-knowledge without ignoring the demands of being embodied, demands not directly accessible to reason. The thinking faculty (διάνοια) elucidates perceptions and images, moves from hypotheses, examines its own processes and demands the grounding of accounts for maximum comprehension. As the most dynamic power represented in the divided line, διάνοια supports the search into all things, itself and νοῦς (mental insight) included. Most dialogues in which Socrates directs the inquiry, either formulating or answering questions as in the *Protagoras*, exemplify the work of reason's power to think.

Continuing to follow not only Socrates' words but also his actions, we can gain clarity on the importance of properly consuming knowledge. Socrates represents the person who, governed by reason, educates others by exercising his own and their thinking faculty (διάνοια).[10] Provoking his companions to think and to examine their beliefs, Socrates turns them around towards themselves. As such, his character also dramatizes the education of persons driven by spiritedness (most interlocutors of Socrates), persons driven by appetites,[11] and dianoetic inquirers concerned either with thinking about the visible (astronomers) or whose thinking proceeds from hypotheses (geometers). In each dialogue in which

Socrates is the main character, inquiry also exercises a therapeutic effect. That is, when properly conducted, inquiry results in self-knowledge either in the form of recognition of one's ignorance or with the added bonus of awakening curiosity in a dormant reason. Once awakened, reason may be stirred sufficiently to govern. The discussion between Socrates and young Hippocrates mentioned earlier offers a compelling example. Consumed by a desire for fame that he expresses as a longing to meet the great sophist, the young man arrived at Socrates' house "just before daybreak" (*Prt.* 310b). Socrates noticed Hippocrates' state of elevated spiritedness and immediately set out to ask him questions that provoked him to think, cooled down his zest, and restored a modicum of discipline. The first questions that Socrates asks rely on humor to establish a friendly rapport before posing harder questions.[12] For the second set of questions, Socrates aligns himself with the young man and introduces a fictional observer of their shared enthusiasm who asks them: "Tell me Socrates and Hippocrates, what is your idea in paying Protagoras? What is he?" (311d). The dramatic moment briefly places Socrates as Hippocrates' friend and fellow admirer of Protagoras. Together they have to answer someone else who questions them. Perhaps this is a fine moment when we can observe the kind of partnership that can obtain between reason and θυμός. It certainly shows how a reason-governed friend can motivate a θυμός-driven person into seeking inner balance.

When the issue concerning the soul's vulnerability to λόγοι (speeches) arises as a central topic, Hippocrates is ready. Socrates must exercise care not to do to Hippocrates what Socrates warns against, that is, persuade him or instill a teaching in his soul. To do so would contradict Socrates' maieutic art (*Tht.* 148e–151b). The discussion, therefore, does not promote any dogma. Instead, Socrates focuses on asking questions about the soul and the nourishment of souls. The mundanity of the food metaphor further deflates the piquancy of meeting Protagoras, thus supporting the inward turn that Socrates' questions promote. Young Hippocrates becomes self-aware through self-questioning. The whole passage nicely exemplifies how best to prepare oneself to meet a teacher.

A related aspect dramatized in the *Protagoras* pertains to the very nature of the multifaceted dialogical strategy deployed by Plato. In dialogues where Socrates leads the inquiry, Socrates either refutes interlocutors or shows interlocutors that they have refuted themselves. In some cases, Socrates refutes himself. At the end of the *Protagoras*, for instance, the discussion defeated both Socrates and Protagoras. Spirited Protagoras sought to win and impress the audience with his great wisdom.[13] Rational Socrates pursued self-knowledge and knowledge of virtue. Neither attained their ends, Protagoras because he unwittingly exposed his ignorance, Socrates because he still does not know "what virtue is in itself" (*Prt.* 361a). Socrates feels confident that clarity on what virtue is in itself is precisely what they require to determine whether or not virtue can be taught. Yet, as in the inquiry about justice in Book I of *The Republic*, Socrates allowed himself to be drawn into a discussion of the properties of an undefined object. Personifying, then impersonating his discussion with Protagoras,[14] Socrates lets the conversation mock them saying: "Socrates and Protagoras, how ridiculous you are, both of

you" (*Prt.* 361a). The impersonated conversation so judges the two inquirers because both were forced to reverse their original claims about virtue in keeping with premises they accepted during the questions and answers, however, neither could define virtue. As such, the impersonated discussion becomes the arbiter and assumes a role usually played by Socrates. Pointing out that neither Protagoras nor Socrates won, the impersonated conversation serves also as a powerful yet indirect denial of Protagoras' claim that Socrates just wanted to win the arguments and has won only because he rigged the conversation to his advantage by demanding they limit the discussion to asking questions and giving brief answers (360e).

By arguing and inquiring using the method of posing questions and eliciting answers, Socrates awakens his interlocutors to the realization of their ignorance regarding matters they had been sure they knew. In fact, many interlocutors act as if Socrates were testing them and all they had to do is get the answer right. They show little curiosity about the subject matter. In those cases, a θυμός-driven state disfigures reason by reducing its work to devising winning strategies. The θυμός-driven state also lulls the desire to know into a state of false satisfaction. When the realization of ignorance is part of self-knowledge and interlocutors admit ignorance, however, interlocutors experience a desire to know previously subdued by the force of their desire for victory and fame. Thus, the elenctic approach for consuming knowledge promotes virtue. Long speeches, on the other hand, persuade, seduce, make the thinking faculty sluggish and most likely will confuse listeners who passively absorb teachings without testing them. That is, long speeches consume listeners and prevent them from properly consuming knowledge. It is not surprising, therefore, that Protagoras insisted on using long speeches, and Socrates threatened to leave the discussion unless they used a short question and answer format (335d–e).

Socrates introduces another problem with long speeches. They require keen memories and Socrates' forgetfulness makes long speeches difficult for him to follow (334c–d). Coupled with his avowed forgetfulness, Socrates' notorious ignorance (361a–b; see also 335a; *Chrm.* 175a–b; *Lysis* 222d–e; and *Resp.* 359c) allows him to begin where his interlocutors could end after engaging in inquiry with Socrates: curious and having acquired a modicum of self-knowledge. Socrates' ignorance, furthermore, supports the short question and answer format since someone who doesn't know what virtue is would have little or nothing to say about virtue unless they invented some story or other as Protagoras did (*Prt.* 320c–323c). The final conversation of the dialogue, however, revealed that Protagoras did not know what virtue is and his long speech had much to hide. Inquirers who know their ignorance would have many questions about what they do not know and would avoid giving long speeches as long as their desires remain under the governance of reason. This is another way in which Socratic inquiry deflects the influence that teachings may have upon the soul. Those who study with Socrates consume knowledge without being consumed by teachings. The knowledge they could consume is that they lack knowledge, and they discover that within themselves. In dialogue with Socrates, every claim is presented for examination, every claim is provisional, and nothing gets settled once and for

all. Peculiarly, the more that knowledge eludes Socrates and his interlocutors, the better teacher he becomes and the better learners they are.

In an interesting twist of events, however, Socrates' encounter with Protagoras showed to perfection Socrates' self-ruling. In order to govern the whole soul, reason must not disfigure or harm itself or the other two loci of desire. Inquiry, then, cannot deprive spiritedness and appetites or deny them the pleasure of achieving their respective objects. We find in many dialogues elements that satisfy every desiring power of the soul or ways in which their excellence forms part of the discussion.[15] In the *Protagoras*, for example, Socrates moderated the young man's spiritedness in preparation for an encounter with a sophist while simultaneously inquiring into the nature of sophistry and the nature of the young man's intentions. The discussion allowed Hippocrates to look inward into his motives and achieve inner balance. Self-possessed, Hippocrates will be sufficiently fit if ever he wants to wrestle with sophists.

Throughout his discussion with Protagoras, furthermore, Socrates seemed to have his θυμός in hand and showed courage. A good example of Socrates' courageous, self-disciplined reasoning appears during the much-debated analysis of Simonides' Ode. After revealing an inconsistency in Socrates' argument, Protagoras earned "a noisy round of applause" from the audience. Socrates experienced a blow: "Everything went black, and I was reeling from Protagoras' oratory and the others' clamor" (339e). In order to regain his equanimity and buy time to think, Socrates involved Prodicus in the discussion and began a dialogue with him intended, presumably, to defend Simonides, Prodicus' fellow citizen from Ceos (340b).[16] Protagoras interpreted the defense of Simonides as an attack on Protagoras himself, and pointed out a major failure (340d). In this instance, Socrates' indirect approach failed dismally to redirect a spiritedness-driven interlocutor. The indirection, however, served to restore Socrates' composure and enabled him to continue the search for virtue.

Socrates experienced something unusual during his meeting with the sophist, a blow not to his θυμός, as the one just mentioned above, but to his appetites. In the first lines of the dialogue Socrates looks radiant with pleasure. An unnamed friend sees Socrates and thinks that the look in Socrates' face betrays an erotic conquest. He assumes that Socrates must have come from "hunting the ripe and ready Alcibiades" who is "certainly a beautiful man" (309a). Curious about the supposed encounter, the friend also asks: "And how is the young man disposed towards you?" His curiosity centers around the possible conquest of Alcibiades by Socrates and the latter's response surprises him utterly. Protagoras, not Alcibiades, provoked the feeling of rapture visible in Socrates' face. Socrates described what moved him with a rhetorical question, "How could superlative wisdom not seem surpassingly beautiful?" (309c; see also *Symp.* 204b). The physical manifestation of the intense pleasure that beauty provokes brings the appetites along but now enhanced to the point of desiring and being satisfied with beauty. Having wrestled with Protagoras and neither won nor lost, Socrates has reaped the fruit of moderation, optimum pleasure. So much pleasure he gained from the conversation that he wants to relive the experience by telling it. Socrates appeals to his friend's θυμός to lure him into

listening. Protagoras' fame suffices. Socrates recounts his meeting with Protagoras from the perspective of someone enthralled with wisdom's beauty.

Is Socrates' narration a contradiction of his practice? Does the narration falsify his proclaimed forgetfulness? After all, Socrates' memory does not seem to falter, and he is narrating a long story. Perhaps the conversation narrated by Socrates deviates from the supposed meeting. Maybe there was no meeting at all. The doubts instilled by Socrates' deflationary claims about his memory set the tone for Socrates' audience to consume the narration wide awake and ready to ask questions. The length of the narration does not seduce because it is broken into several conversations, and the initial discussion between Socrates and Hippocrates prepares the audience to deflect the impact of Protagoras' long speech. In fact, those listening to Socrates' narration are better prepared by the account than Socrates was for the initial encounter with the sophist. Socrates took the brunt of the lived display of wealth, political power, and civic prestige that gathered in Callias' house. The dialogue's audience, furthermore, does not have to risk or experience disapprobation either from the sons of Pericles, or from Charmides, Phaedrus, Pausanias, and Agathon, to name a few (*Prt.* 314e–316b). Most significantly, mediated through Socrates' narration, Protagoras' voice lacks the Orphic quality that enchanted his disciples to follow Protagoras from city to city "in a trance" (315a–b). Dialogically consuming knowledge, either directly engaged in the conversation or listening to it in narrative form, seems to enhance the power of reason for inquiry and for self-governing in ways analogous to Greek tragedy, provoking audiences to think about current or likely predicaments.[17]

Sometimes the testing of teachings requires extreme measures. No more so than when pursuing what virtue is in itself with a self-deluded, spirited interlocutor like Meno. Engaged with Meno on a quest for virtue, Socrates' mission[18] is tested to the utmost. Meno memorizes teachings incautiously and preserves them as trophies that he periodically displays to impress. Perhaps more than any other interlocutor, Meno lacks education and is enslaved by the teachings advanced by famous people. Gorgias' teachings, as well as famous debaters' tricks, reverberate through Meno's soul, projecting shadows like the artifacts in the cave allegory, "statues of people and other animals, made of stone, wood, and every material" (*Resp.* 514a). That is, Meno memorized teachings without testing them, without questioning those who espoused them, and without questioning himself. As a result, the views Meno expresses engage mostly his memory. When Meno voices teachings that he has heard others expound, he does so without knowledge and unable to explain himself. Under scrutiny, the teachings evanesce, like Daedalus' statues which untethered run away upon examination (*Meno* 97d). To educate Meno, Socrates will need to turn him around so that Meno may look first at the fire, then at the artifacts, and outside the cave, at sunlight. Meno, like the released cave dweller, will also be "pained and angry at being treated that way" (*Resp.* 515e). It is at the point in the dialogue when Meno strikes back that we find Socrates at his best. Yet even Meno's attack consists of something Meno has heard others say about Socrates and about inquiry.

Like the dialogue in which he appears, which itself opens abruptly, Meno begins in the middle. He asks whether Socrates can answer a series of questions about virtue: "Can virtue be taught? Or is it not teachable but the result of practice, or is it neither of these…" (*Meno* 70a). Appropriately, Socrates postpones Meno's questions, proposing instead a more promising starting point by asking: "What is virtue?" (71d.4–5). Meno's first response, besides neglecting the rules of good definition, momentously points to problems which still plague us today: sexism, racism, agism, to name a few. Meno splits human beings according to assigned gender roles, age, and social standing, then he assigns a virtue to each bit. Each piece of virtue, in turn, is itself characterized by a confusion of views. For example, Meno defines the virtue of a man convoluting parts of Polemarchus' and Thrasymachus' definitions of justice (*Resp.* 331e–354c). It "consists," he says, "of being able to manage public affairs and in so doing to benefit his friends and harm his enemies and be careful that no harm comes to himself" (*Meno* 71e). Patiently and orderly, Socrates presents arguments to unify the human and its virtue. When it is Meno's turn to offer a unified characterization of virtue, he offers instead a part rather than a unified composite. He defines all of virtue choosing a fragment of the definition he had previously designated as the virtue of a man: "to be able to rule over people" (73d).[19]

Angry and frustrated by Socrates' questions during several attempts to define virtue, but still unable to use his own words, Meno pulls from memory a trick which strikes at the heart of Socrates' practice. Meno's expression of perplexity strikes Socrates as an excellent moment to start the search again. He tells Meno: "perhaps you knew before you contacted me, but now you are certainly like one who does not know. Nevertheless, I want to examine and seek together with you what it [virtue] may be" (*Meno* 80d; my interpolation). Meno rejects the invitation and spouts a garbled version of an old argument which Socrates reorganizes. The argument supposes that inquiry is either futile or impossible. If we know, it is pointless to inquire and if we don't know, we also don't know for what we should search. Socrates denounces the argument as unsound and strives to awaken Meno's curiosity by quoting important figures that will appeal to Meno's amassing habit. Socrates mentions he has heard "wise men and women talk about divine matters" and Meno is caught. He interrupts Socrates and eagerly asks: "What did they say?" Further tantalizing Meno, Socrates responds: "What was, I thought both true and beautiful." Meno takes the bait: "What was it, and who were they?" (81a). Strengthening his lure, Socrates invokes priests and priestesses, but not just any priests and priestesses. He quotes those "whose care it is to be able to give an account of their practices" (81a–b). They are joined by Pindar and many divine poets, in saying that "the human soul is immortal…it is never destroyed, and one must therefore live one's life as piously as possible" (81b), because Persephone will "return to the sun above" the souls of those who will beget noble kings who will be known as "sacred heroes" (81c). The sources for the teaching proposed make an impressive lot. So much so that Meno fails to notice Socrates' request that he reflect on the matter and treat it as a view to be tested. Socrates urges Meno, "see whether you think they speak the truth" (81b).

That is precisely what we need to do with this passage introducing the practice of recollection.

Let us analyze the arguments. I suggest that there are three separate arguments in the section. The first offers an inducement for living virtuously or at least to practice the virtue of piety. This argument proceeds from the claim that the soul is immortal or withstands both dying and being born. Therefore, we should live piously because Persephone will punish and reward souls accordingly. This argument says nothing about recollection nor does it solve the problem posed in the debater's argument about inquiry. Instead, Socrates' first argument fleshes out the importance of caring for an immortal soul. The myth worked as an inducement to keep Meno's attention focused on recollection even to the point of asking Socrates to teach him that "what we call learning is recollection" (81e). Keep in mind, though, that the discussion on immortality and recollection supposedly responds to the debaters' trick (80e).

The second argument begins as the first but now focuses on knowledge. The soul is immortal and as such has been born often, "has seen all things here and in the underworld," so that "there is nothing which it has not learned" (81c), therefore "it can recollect the things it knew before" (81c–d). This argument raises more questions and solves nothing posed by the debater's argument. When did our souls learn (*Phd.* 76c)? How did the soul learn anything to begin with? If we take recollection to entail remembering from previous lives, from what life did soul remember when it first learned? If recollection does not consist in learning from previous lives, what does it entail?

The third argument makes some sense. It is based on the premise that "the whole of nature is akin," that "the soul has learned everything," and therefore, after recalling one thing, a person may discover "everything else for himself, if he is brave and does not tire of the search, for searching and learning are, as a whole, recollection" (*Meno* 81d). As stated, the argument is tied to the myth of reincarnation or at least to the sense that at some point, in some unexplained way, the soul has learned all things. If one removes the second premise ("the soul has learned everything"), the rest of the argument could be seen as suggesting that recollection is an ordinary associative process of inquiry that proceeds, as Socrates describes it in the *Phaedo*, moving from a perception of an item to a remembrance of another item somehow related to the first (*Phd.* 73c–d, 76a). To complete the recollection, however, the perceiver must also discriminate among unlike things (73d).[20] In the *Phaedo* the argument moves from recollection to immortality, but the process of recollection receives a more detailed characterization than in *Meno*. Socrates presents intriguing examples to explain recollection, as Simmias requested, by experiencing it (*Phd.* 73c).[21] All the examples involve recognizing likenesses and differences. The first two examples incorporate erotic experiences. In the first, lovers, "whenever they see a lyre, a garment or anything else that their beloved is accustomed to use, they know [ἔγνωσαν] the lyre, and the image of the boy to whom it belongs comes into their mind" (73d; my interpolation); in the second, when someone sees Simmias he recollects Cebes. The next examples move through images. Socrates asks and Simmias agrees that seeing an image

of Simmias can provoke a recollection of Cebes or a recollection of Simmias himself. Again, the process moves through similarities and differences, but now we realize that what is similar differs from that which it resembles. I take it that gradually, Socrates is preparing his friends to properly consume knowledge of forms. That topic, complex as it is, would take us too far afield. My point now is simply that the process of recollection as introduced in the *Meno* and the *Phaedo* forms part of how Socrates prepares for inquiry a person driven by a θυμός rendered unstable by teachings (Meno's predicament) or fear of death (Cebes' and Simmias' situation).

Presumably, the argument for recollection is preferable to the debater's argument because, unlike the debater's argument which makes people idle, Socrates' arguments render them "energetic and keen on the search" (*Meno* 81e). Consider what brought recollection to Socrates' mind in the *Meno*. Meno gives a version of a debater's argument which offered Socrates a choice between considering inquiry impossible or merely futile. Socrates recognizes and rephrases the argument, and this brings to Socrates' mind warnings by priests, priestesses, and poets about the need to care for our souls. His need to tend to Meno's soul brings the rest along. That is, Meno's condition provokes the recollection of recollection.

Thus, recollection, strictly speaking, entails much more than the kind of remembering exemplified by Meno's hoarded teachings. Socrates' avowed inability to remember mentioned earlier would clash with such a process though it would support Socratic ignorance in a deflated sense, not as ignorance of what something in itself is, which is the driving force of inquiry in most dialogues. Recollection as described above requires an active imagination, keen perception, recognition of similarities and differences, and the ability to distinguish among similar entities. It is reason's movement through language that allows inquirers to deploy the semantic power of terms in the service of investigating what something in itself is. As such, recollection does not offer a theory of knowledge. Its scope is much broader. I take recollection to offer a way of calibrating how people consume knowledge and how reason is able to govern the soul through inquiry as long as reason doesn't confuse learning with emerging victorious in a contest or use erudition to impress or win adulation.

Recollection points inwardly, demanding of the teacher the maieutic art mentioned above and of students that they admit their ignorance and test their beliefs. Consuming knowledge appropriately does not require a container where teachings may be kept for either examination or later use. Good consumers do not seek to contain the teachings. They strive to expose teachings to sunlight and test them. In this respect recollection works with Socratic midwifery, a process through which Socrates' companions find in themselves and bring forth "many fair things" (*Tht.* 150d). Presumably, the most important aspect of Socrates' midwifery is "the ability to apply all possible tests to the offspring, to determine whether the young mind is being delivered of a phantom, that is an error, or a fertile truth" (150c). Strictly speaking, then, those who associate with Socrates and benefit from his art are not students. Socrates has no teachings to sell and his δαιμόνιον (divine sign)

stops him from doing more than his maieutic art requires (150c). When Socrates thinks someone does not seem to be pregnant with questions, he pairs them with other practitioners, like Prodicus (151b). For those who, like Theaetetus, have something within them, Socrates empowers them to look within themselves and become wise consumers of teachings. That is, they release rather than collect teachings. This explains why Socrates indefatigably searches but does not settle.

Thinking will not spare even Apollo's claim concerning Socrates' wisdom. With far more modest recommendations, Protagoras and Gorgias became wealthy and extremely influential. Why did Socrates not rest on the glory of the oracular accolade? Presumably, because he knew how to respond to oracular statements and realized that those who take Pythian statements literally perish in the process. How did he know this? Perhaps he understood Sophocles, or perhaps his inner δαιμόνιον stopped him when he tried to respond to oracles inappropriately. On first hearing Chaerephon's tale, Socrates asked himself: "Whatever does the god mean? What is his riddle?" (*Ap.* 21b). Seeking to test the divine claim, Socrates examined someone reputed for his wisdom. After the encounter, Socrates reflected and thought: "I am wiser than this man; it is likely that neither of us knows anything worthwhile, but he thinks that he knows something when he does not, whereas when I do not know, neither do I think that I know" (21d). Then, Socrates continued to probe the oracle by systematically testing other Athenians reputed for their knowledge. Uncritically believing the oracle would have committed Socrates to having at least one unquestioned belief: that Socrates is wise. Refusing to test that belief, Socrates would have become foolish, thus unwittingly refuting the oracle. Adopting a belief about himself without question would have derailed his search for self-knowledge and would have rendered him idle. In fact, the oracular utterance posed a greater danger to Socrates than did the debater's argument in the *Meno*.

One final test remains. I call it Socrates' last temptation because his response to it appears in the *Phaedo*, the dialogue that dramatizes the philosopher's final hours. Having guarded his integrity by adhering to his art and refusing to resort to sophistic defenses, traditional alternate penalties, and escape from prison, Socrates faced the greatest and last temptation: giving in to the natural urge to dogmatically cling to the belief that his life-long mission, his preferred method for pursuing self-knowledge was, indeed, unquestionably the best. After all, if the unexamined life is not fit for a human being (*Ap.* 38a) and if death seems preferable to giving up the examined life, why not assent to the belief that philosophical inquiry and argumentation surpass all practices? Why test the belief that the recurring dream was encouraging him to continue doing philosophy? Why consider the possibility that the dream was recommending he engage in another muse-inspired approach to inquiry (*Phd.* 60e)?

While inquiring with Crito and other friends who visited him in prison, Socrates was testing his own practice, asking himself whether poetry, not philosophy, was his mission. Simultaneously, he was testing the claim voiced in a persistent dream that repeatedly urged him: "practice and cultivate the arts [μουσικήν]" (*Phd.* 60e; my interpolation). Socrates had thought that the dream was simply encouraging

him to continue his habitual practice, but as his death approached he questioned the meaning of the dream's message.[22] He even tried "putting the fables of Aesop into verse and composing a hymn to Apollo" (60c–d).

The choice of verse as possible practice among the muse-inspired arts makes Socrates' self-criticism more remarkable still. After all, he does not seem to have much talent for telling fables. Writing verse, furthermore, was not a practice that fared well under Socratic scrutiny. The testing of his practice thus conceived seems complete. This should not surprise us coming from an inquirer courageous enough to spend his last hours helping his friends overcome their fear of death by testing arguments for the immortality of the soul.[23]

Notes

1 All translations of Plato are from Cooper and Hutchinson (1997).
2 Presumably, the Spirited faculty, too, is subject to some persuasion and education.
3 In this essay, the name *Socrates* refers exclusively to the character in Plato's dialogues. I take it that this dramatic figure represents, among other things, the philosopher or the practice of philosophy enacted by someone whose soul is justly governed by reason.
4 The autonomy of reason (λογιστικόν) seems essential to knowing. Witness to this is Socrates' insistence that his teaching is maieutic (*Tht.* 149a–151d) added to the claim that the most courageous and wisest of souls is the one least liable to be altered by external influences (*Resp.* 381a).
5 Socrates describes Theaetetus' restlessness about his inability to define knowledge, his ignorance in the matter, not as an emptiness but as a pregnancy (*Tht.* 148e). Recollection also points to the desire to know arising from fullness, as does Diotima (*Symp.* 206e).
6 *Resp.* 434d–445e and most of the text after the division becomes part of the search for justice.
7 "Yet, surely, the story [of Leontius] suggests that anger sometimes makes war against the appetites as one thing against another" (*Resp.* 440a–b; my interpolation).
8 It is worth noting that the examples show strong links between the desiring elements, i.e., reason's self-harm co-opts the appetites and/or θυμός.
9 Notice the caveat: "And if there turn out to be any intervening elements…" (*Resp.* 443e). The comment invites dialogue and inquiry about the division of the soul.
10 My sense is that when either Parmenides or a Stranger directs the inquiry, readers can observe νοῦς at work. Socrates points to the work of νοῦς when he introduces dialectic, the method through which thinking looks to νοῦς for justification.
11 Consider, for example, Cephalus in Book I of the *Republic*. There are very few appetite-driven interlocutors. I suspect that is the case because reason speaks directly to spiritedness which in turn brings the appetites along.
12 "Recognizing his fighting spirit and his excitement, I asked him: 'So what is that to you? Has Protagoras done anything wrong to you?'" (*Prt.* 310d).
13 Protagoras' conduct brings to mind the description of a sophist in *Theaetetus*, as someone who "would keep on refuting you and not let you go till you had been struck with wonder at his wisdom…." (*Tht.* 165d–e).
14 Socrates personifies arguments in other dialogues, i.e., *Tht.* 191a; in *Cri.* 50a–54d Socrates both personifies and impersonates the laws of Athens.
15 For example, the *Charmide*s inquires into moderation, the *Laches* and the *Protagoras* into courage, and the *Republic* into justice as well as all the other virtues.
16 On Prodicus' art of division and the famous story of Herakles' choice, see Xen. *Mem.* 2.1.21–23.
17 See Scodel (2010, 56–71). See also Scott (2013).

18 *Ap.* 30a–b identifies that mission to involve bringing others to care about virtue.
19 Meno's responses have implications both for knowledge and for virtue. A discussion of each definition would take us far afield and what next needs our consideration is how Socrates proceeds in seeking to educate a spirited person whose reason is saturated by teachings. The debater's argument and the myth of recollection amply show Socrates at work and the power that reason has to educate and release from tyranny an uneducated soul.
20 It is worth noting that in *Phaedo*, as in *Meno*, the introduction of the process of recollection does not support the claim for which it was invoked. In *Phaedo*, recollection does not prove the immortality of the soul. In *Meno*, recollection does not defeat the debater's argument. In both cases, however, recollection serves a practical necessity. In *Phaedo*, discussing recollection helps Cebes and Simmias to overcome their fear of death. In *Meno*, introducing recollection helps to motivate Meno to re-enter the inquiry. In both cases it is Spiritedness that benefits from the discussion of recollection.
21 Recollection does not require innate knowledge. Socrates asked, and Simmias agrees that "if anyone recollects anything, he must have known it before" (*Phd*. 73c). However, at 76a–b Simmias is given the following choice: "That we are born with this knowledge or that we recollect later the things of which we had knowledge previously." Somehow, then, we lost or forgot what we learned, and it seems that recognition of that ignorance matters to the search for knowledge. Recollection retains the myth of other lives but, at least in *Phaedo*, we can move to see the process in more natural terms, albeit tied to the Forms (76d–e).
22 The verb παρακελεύομαι (*Phd.* 60e) could mean *encourage* or *recommend*. Socrates examined both possibilities.
23 I want to express my gratitude to Dr. Kael Ashbaugh for his helpful comments and challenging discussions on consuming knowledge.

Bibliography

Plato. 1997. *Complete Works*. Translated and edited by John Cooper and D. S. Hutchinson. Indianapolis: Hackett.

Scodel, Ruth. 2010. "Historical and Intellectual Background." In *An Introduction to Greek Tragedy*, 56–71. Cambridge: Cambridge University Press.

Scott, Michael. 2013. *Ancient Greeks: The Greatest Show on Earth*. Directed by David Wilson and Catherine Abbott. Aired on BBC 4, 27 August, 3 September, 10 September, 2013. https://www.bbc.co.uk/programmes/b039gly5.

8 Souls Within a Soul

The City-Soul Analogy Revisited*

Carlos Cortissoz

Introduction

Readers of the *Republic* have usually seen the passages about the stereotypical characteristics of communities as grounding the city-soul analogy. Plato indeed takes those attributions to be a powerful reason to expect the same types (εἴδη) and manners (ἤθη) in both the city and the individual soul and, hence, to affirm the structural isomorphism of polis and psyche (*Resp.* 435e). This natural reading is considerably challenged by Bernard Williams' "The Analogy of City and Soul in Plato's 'Republic'" (2001), where it is shown to entail paradoxes that make the analogy flawed. The point lies in the derivation principles that communal stereotypes imply.[1] For while a community is expected to be, say, spirited precisely because all or many or its most prominent members are spirited, it seems that Plato's perfect and imperfect constitutions fail to meet this simple requirement.

In this paper, I will briefly examine Williams' puzzles and lay out their core challenges. Then, I will discuss two of the most prominent attempts to meet them: Lear's psychological interpretation and Ferrari's metaphorical interpretation of the city-soul analogy. As I hope to show, they both entail consequences that run against some of the *Republic*'s most important aims or make them plainly unattainable. Finally, by distinguishing psycho-political forces (ἤθη) from psycho-political constitutions (εἴδη), I propose a solution that holds the derivation rules without falling prey to Williams' paradoxes. This solution, we will see, calls for a *prima facie* compelling model of the unity of virtues, that is, a model showing how everyone in Callipolis may possess, in some way, all the virtues.

* I am deeply grateful to Professor Anthony Preus, under whose mentorship the ideas in this essay came about and developed. Every person—says Coleridge—is born an Aristotelian or a Platonist. I am glad I had a consummate Aristotelian as a mentor, one that challenged both Plato and my reading of Plato but was always willing to find vestiges of my Plato in his Aristotle. May this text be a humble recognition of his contribution to the formation of a true philosophical κοινωνία, one based on the love of learning, rather than the love of prestige.

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Williams' Puzzles

In "The Analogy of City and Soul in Plato's 'Republic'" Williams targets the city-soul analogy by progressively presenting the puzzles resulting from the derivation rules which, in turn, are elicited from the passages on the stereotypical characteristics of communities. Williams initially argues that if Plato intends those passages to ground what he calls the "analogy of meaning" (i.e., the idea that justice applies to cities and souls, and it instantiates the same εἶδος in both) then he engages in either a pointless or absurd enterprise. If the qualities θυμοειδής, φιλομαθής, φιλοχρήματος (Pl. *Resp.* 435e) are found in cities because they are primarily found in souls, then we do not need to explain how they apply to souls in order to prove that they apply to both city and soul. Presumably, this would be the case of justice as well. The fact that the city's justice comes from its citizens makes pointless the effort to show how justice applies to the individual—at least in order to prove that justice applies to both city and soul.[2] On the other hand, if the examples yield a kind of definition of justice, something like "A thing is just if and only if its constituent parts are just," then we have an infinite regress.

But, as Williams recognizes, Plato does not intend the derivation rule to yield the common logos of justice. The common logos is, rather, the principle of justice found in the city's classes doing their job (where the logistic class rules), and ratified when traced back to the individual as each part of the soul doing its job (where the λογιστικόν rules). Although this suffices to evade the charge of infinite regression, it entails other charges that have fatal results for the analogy. Since Plato is interested in sticking to a "whole-part rule" (2001, 159), the derivation rule according to which a city is F *iff* its citizens are F, we have:

- A city is F *iff* its citizens are F.
- The logos of a city's being F is the same as that of a citizen's being F (the same εἶδος or F-ness applies to both).

Applying this to the case of justice we have:

1. A city is just *iff* its citizens are just.
2. The logos of a city's being just is the same as that of a citizen's being just (the same εἶδος or F-ness applies to both).

Since the logos of justice consists in each element (λογιστικόν, θυμοειδές, and ἐπιθυμητικόν) doing its job—where the λογιστικόν rules, we then have:

3. For the city, to be just involves having a logistic, thymoeidic, and epithymetic *element*—where the logistic one rules.
4. For the city, to be just involves having logistic, thymoeidic, and epithymetic *citizens*—where the logistic ones rule.

But (1) and (4) entail a contradiction. For, according to (4), a just city must contain epithymetic citizens and, says Williams, an epithymetic person is surely not just, which means that the city is just despite the majority (they indeed account for the largest class) not being just. We can see the contradiction conversely as well. If (1) holds and the city is just if, and only if, its citizens are just, then the logos of the city's being just must be different from the logos of the individual's being just. In short, if the whole-part rule holds, what he calls the analogy of meaning does not and vice versa.

The tension, Williams observes, underlies the whole of Plato's project in the *Republic*. He invites us to consider the consequences of sticking to the whole-part rule while trying to make out the justice of the non-logistic citizens. If epithymetic citizens share, in some restricted manner, a logistic nature (enough to do their job and recognize the rulers) then, when traced back to the individual soul, we have an awkward consequence: the ἐπιθυμητικόν in the just soul obeys the λογιστικόν by having some λογιστικόν of its own. But if the ἐπιθυμητικόν does not share a logistic nature, and it is weakened and kept in place by the λογιστικόν with the help of the θυμοειδές, we have a very unappealing model when we apply it back to the state: an unjust, uncooperative, and irrational epithymetic class is accordingly repressed by cold-hearted rulers assisted by a highly spirited political police.

The problem cannot be solved, Williams continues, by abandoning the "whole-part rule" and adopting a "predominant section rule": a city is F *iff* its leading, predominant class is F. This is true of the just city, for the guardians are certainly just. It is also true of the imperfect constitutions discussed in Book VIII. And it again takes us to an "ineliminable tension in Plato's use of the analogy" (Williams 2001, 162). In the case of the city, the question is how we are to make sense of the difference between the epithymetic element when appropriately ruled by the logistic guardians, and when led astray, like in the oligarchic or democratic constitutions. For it either shares a logistic nature, by virtue of which the guardians can persuade it into order and structure, or it does not and then epithymetic citizens are not really made just and better by the just constitution: they are at best contained, repressed, as if the just city was not virtuous but only ἐγκρατής (continent). The tension reflects back onto the soul, where we would have ἐπιθυμίαι that share somewhat in reason, or a model of inner justice that amounts to the repression or even the elimination of ἐπιθυμίαι.

To be sure, it would still be true that a city is just if, and only if, its leading, predominant class is just, where justice means the same both for city and soul. The logos of justice (λογιστικόν, θυμοειδές, and ἐπιθυμητικόν each doing their job—where the λογιστικόν rules) would require logistic producers and auxiliaries in the city, and logistic appetitive and spirited parts in the soul, with the consequence that everyone in the city would turn out logistic and just. In this case, if the analogy of meaning holds the "predominant section rule" does not, but rather some form of the "whole-part rule." Conversely, if the "predominant section rule" holds, and the just city may contain non-just citizens, then the logos of justice would not require logistic producers and auxiliaries in the city, nor logistic appetitive and spirited parts in the soul, with the consequence that both the city

and the soul would be just even though huge parts of them are not, and can never be, just.

Two Alternatives

Two alternatives have been proposed to meet the challenge. One of them is to contest Williams' derivation principles on the basis of their excessive formality and, consequently, their failure to grasp the causal-psychological transactions between polis and psyche, which are Plato's real target of analysis. It is not as simple as the city being spirited because all or many or its most prominent members are spirited. The city is spirited because those spirited citizens are successful in shaping the city in their image and, to be sure, that is not the result of a mere logical relation between polis and psyche, but of complex psychological transactions between them: the effective externalization of certain *types* and *manners* (of a whole value-system indeed) onto the polis, and the correlative internalization of those into the souls of private citizens.

This position, conceived and defended by Jonathan Lear in "Inside and Outside the Republic," has the virtue of rendering appealing various aspects of Plato's *Republic* that have been considered terribly unappealing. The banning of traditional poetry from Callipolis, for example, acquires a very interesting flavor: poetry, and culture in general, is the arena where those psychological trade-offs take place, where values are externalized, processed, transformed, and sent back into the individual, who might then become an accomplice of the ruling class in their own domination. If not banned, certain forms of culture need at least to be politically analyzed. Patterns of gender, race, ethnic, and economic domination, or terrible ideas of how a person should look, for example, could be easily identified in mass culture, and even though they are in a way reflecting realities, they are telling lies to a soul that embraces them so deeply as to affect the whole of a person's life (cf. Lear 2001, 190–191; see also Pl. *Resp*. 382b).

However, it is not entirely clear that this position meets Williams' challenge. The process of externalization, if not fully captured by the derivation principles, is still an instance of derivation. And if those principles can be shown to entail contradictions it remains obscure how the externalization of a value-system—appealing though it may seem—is conceptually possible. If Plato's just city is the result of the externalization of a value-system carefully designed by philosopher kings and queens onto the collective soul, and the correlative internalization of it by individual souls, then we still need to account for the fact that a polis is just if, and only if, all or many or its prominent citizens are just, that is, to fully meet Williams' challenge. Moreover, Lear's *Republic* adds one more awkward doctrine to the long list of Plato's awkward doctrines (such as the denial of *akrasia* and the notion of learning as recollection) which scholars do not know very well how to cope with. It is the idea that the polis is an extension of the soul, not just like a soul, that a political regime is a psychological structure, that we are souls within a soul and that "it is ultimately misleading to think of there being merely an analogy between polis and psyche" (Lear 2001, 187–188).

Finding himself in this situation, Ferrari proposes a different way out of Williams' objection (Ferrari 2005, 2009, 407–413). For him, that a collectively F class is comprised of individually F people is neither ruled in nor ruled out by the analogy. As the analogy operates, the just city has a character that is analogous to the just person, namely, that in both each part does its own. But to do our own within the city does not necessarily require us to be just individuals, that is, individuals whose parts, in turn, do their own.

As it stands, Ferrari denies Williams' derivation principles or, rather, accepts them with an important qualification: a city is F if, and only if, its citizens (all or many or its most prominent) are F, but the individual F-ness required for the city to be F is an F-ness "as it relates to the city" (πολιτικήν, Pl. *Resp*. 430c). This can be seen, he argues, through a couple of examples. A courageous auxiliary class requires courageous soldiers. However, a soldier can be courageous facing dangers to the city (a virtue inculcated by the rulers) and, nonetheless, lack the courage to "face down fears of whatever kind, as instructed by his own powers of reason" (Ferrari 2005, 44). Similarly, a just city may require just people, but only insofar as they do their own task (i.e., the task the city requires them to do), not as they instantiate the proper alignment of the tripartite soul.

Ferrari's strategy depends on reinforcing the analogical character of Plato's parallel treatment of polis and psyche, arguing that justice in the polis was never meant to be anything different than an image (εἴδωλον, Pl. *Resp*. 443c)[3] of justice in the soul (2009, 408). Precisely because it is an analogy of elements and structure, and nothing else, it is possible for justice in both city and soul to mean the same and, nonetheless, to require from us different things: a civic quality in one case, and a private quality in the other. For in one of the analogues the individual is the whole, but in the other it is just a part. We should not feel particularly encouraged, Ferrari concludes, to look for privately wise people in a civically wise ruling class. We might very well find them, that is for sure. But a mere analogy, again, can neither rule it in nor rule it out.

However, this interpretation of the analogy disjoints city and soul in such a way that it is difficult to bring them together again. For no matter how frequently a civically just person turns out to be privately just, the relationship between civic and private justice remains purely contingent. And whether or not Plato had been able to prove throughout the *Republic* that a psychic harmony is both necessary and sufficient to act justly in the "vulgar" sense, as Sachs famously put it (1963, 141–158), he certainly did not want the relationship to be a contingent one. Right after tracing back the principle of justice to the soul, Socrates asks Glaucon to try it out with *vulgar cases* (τὰ φορτικά), such as giving back a deposit of silver or gold that has been entrusted, refraining from robbing, stealing, and betraying friends in both public and private, keeping oaths and agreements, refraining from adultery and disrespect for parents, and recognizing the gods (Pl. *Resp*. 442d). The cause of this behavior (τούτων πάντων αἴτιον, 443b), Socrates contends, is no other than the person's inner harmony, that in them each part does its own with regards to ruling or being ruled. An externalization of psychic harmony from the private to the civic sphere is patent in this passage.

The person's private justice, i.e., each part of their soul doing its own, is meant to be the cause of the person's civic justice, i.e., of them doing their own in the civic sphere and, thence, of justice in the city as a whole, i.e., of each class doing its own. It is the same power (δύναμις), Plato wants to say, that which makes both the person and the city just: "Do you still, then, look for justice to be anything else than this power (ταύτην τὴν δύναμιν) which holds such men and cities?" (443b).[4] And that power makes the person as well as the city both privately and civically just.[5]

Such externalization of justice from the private to the civic sphere had already been suggested at the end of Book I, when Socrates asks Thrasymachus whether a band of pirates or robbers with an unjust purpose in common would achieve it if they were utterly unjust to each other. The example is aimed at showing that injustice, whether in a person or group, appears as having the power (τὴν δύναμιν, 351e) to render a thing incapable of cooperating with itself (πράττειν μεθ' αὑτοῦ, 352a) impeding, consequently, the realization of the group objective. The point is confirmed right away when traced back to the individual: if present in a single person (ἐν ἑνί) injustice renders them incapable to act, creating factions within (στ ασιάζοντα), making them disagree with themselves, and then with the people next to them. Injustice factionalizes the soul, and then factionalizes the person from the political community (352a).

The *Republic* as a whole will show that a band of pirates, engaged as a group in performing unjust acts, will never be thoroughly just in the private sense because if they were, they would never undertake as a group unjust enterprises. After all, they are being driven by a strong appetitive element within that has enslaved both spirit and reason (all their impetus and rational capacity is submitted to the satisfaction of an unnecessary desire), and as a result of their group psychic disharmony they want to and do act unjustly toward others. But they will not be perfectly unjust either, if they want indeed to rob something, "since the completely depraved are completely unjust and unable to act" (352c). We may learn that from Book IX too: the thoroughly tyrannized cities and souls are rendered unfit to act, but before getting to that point they will have hurt everyone around, whether other cities and states in the case of the tyrannical city or parents, relatives, friends, and fellow citizens in the case of the tyrannical soul. The externalization of a tyrannical regime from the soul onto the city is patent here as well. The tyrannized soul who manages to go unpunished tyrannizes a city that, in its turn, tyrannizes other cities: the tyrant needs foreign enemies, so the people feel the need of a leader (566e). The process will not stop until two perfect factions have been created: the tyrannical city and its colonies, that are now its *slaves*. But this situation is unsustainable if the tyrant does not enslave his own fellow citizens, again, until two perfect factions have been created within, the tyrant and its people, that are now his slaves (569c). Unable to trust anyone, friendless, and taken over by fear, both the tyrannized city and its ruling tyrant are unfit to undertake any enterprise, and confine themselves to their destruction at the hands of others or their own. As far as justice and injustice are concerned, Plato intends the same δύναμις to carry effects in both the private and civic spheres. Again, Plato might not have been

successful in proving this point—that is Sachs' challenge. But not even Sachs denies that Plato does intend that.

If an interpretation leads us to think that there is one justice "as it relates to the city" and there is another "as it relates to the soul" and, furthermore, that a contingent relation obtains between them, we need to ask ourselves if the *Republic* is not being somewhat rarefied by it. For we cannot deny that, for Plato, the aim of the city is to make its citizens virtuous and happy in the inner, private sense, which Ferrari's solution renders rather impossible. He indeed argues that it is possible for a ruler to rightly grasp what is good for the city but fail to grasp what is good for himself: a conclusion difficult to square with some points made in other dialogues (see Ferrari 2005, 44). How can a person rule others, if they cannot rule themselves, asks Socrates in the *Gorgias* (Pl. *Grg.* 491d). That question would not make much sense were it not the same δύναμις that instantiates itself in both city and soul. The point is confirmed in the *Republic*: the tyrant who rules others when he cannot even rule himself is like a weakened, sick body that is forced to compete and fight against other bodies all its life (*Resp.* 579c).

If Ferrari is right, there will always be a fundamental gap between civic and private virtue, between city and soul, that makes the latter unreachable by the citizen's public sphere. Education and the rule of philosopher kings will fall short to accomplish the task Plato assigns to them, and it will be impossible to defend Plato's educational system against the charge of propaganda, for it will have no function other than to promote a set of virtues "as they relate to the city," i.e., as required to make the citizen an accomplice of the ruler's government upon them. No matter how well the city manages to make citizens behave in politically correct manners, the citizen will always be a potential hazard to the city unless those politically encouraged behaviors do reach the citizen's soul and make it harmonious.[6]

On the other hand, if the citizen's inner harmony is disjointed from the civic virtue and, thence, from the city's inner harmony, it is not clear that we can meet Sachs' challenge. Sachs argues that in order to prove that the vulgarly just person is happier than the vulgarly unjust (that is, in order to meet Glaucon's challenge), it is totally irrelevant to adduce a proof according to which the Platonically just person is happier than the Platonically unjust. The internally harmonious person is happier than the internally discordant, Sachs agrees. But, he asks, how does that eliminate the possibility that a person who is vulgarly unjust be indeed happier than the vulgarly just? It certainly cannot, unless we can establish some connection between, to put it in Ferrari's terms, the virtues as they relate to the city and the virtues as they relate to the soul stronger than mere regularities in nature. Ferrari's solution confirms the irrelevance: in order to convince Glaucon that the civically virtuous person, the person who refrains from πλεονεξία (greediness), is happier than the civically vicious, Plato contrives an enormous argument that the soul is like the city, and as important as it is that desires and emotions behave well within their soul, it is for them to behave well within the city. The link between behaving well within the city and their private desires and emotions being well governed by reason is reduced to the rather fragile suggestion that, if they do their

part, the inner happiness of the superstructure they belong to will be safeguarded. Glaucon might certainly have retorted: is the happiness of my inner structure, and not only that of the superstructure, equally safeguarded? For Ferrari, the role of the analogy is to provide individuals, both as citizens and persons, with an awareness of how to live in society. As a metaphor, it encourages the person to see the state they live in as an organized whole, just as themselves, rather than to adopt the usual perspective for which the political dimension is exhausted by the relation of the self to others (Ferrari 2005, 79). But this awareness seems too little to deal with Sachs' challenge. It seems, then, that if the analogy is to play a role in the overall argument of the *Republic* that justice is good for itself and for its consequences, we need to account for a relation between city and soul that goes beyond the metaphorical sense.

If we want to avoid these consequences, we need to take a step back and ask ourselves if there is a way to account for Williams' derivation rules that does not imply paradoxes. That account, I argue, can be provided by bringing to the table Plato's doctrine of the unity of virtue. Williams, ignoring the crucial fact that the just city does not require the rulers to merely be logistic, the helpers thymoeidic and the workers epithymetic, but the rulers to be wise, the helpers courageous and everyone in the city moderate, finds Plato's analogy flawed. With the consequence, moreover, that Plato's psycho-political ideal consists in the desires being as strong, the emotions as policing, and the rulers as logistic as possible—it is no surprise that Callipolis had been traditionally seen as a system of perfect repression. But bringing to the table the fact that, in a sense (a sense that needs to be specified), the wise, the courageous, and the moderate are also just, the predicament can be dissolved. It will be true that a city is just if, and only if, all or many or its prominent citizens are just and, on the other hand, it will be true that justice is the same δύναμις in both city and soul.

Types and Manners

Upon a closer inspection, we may see that Williams is misled by the passages about communal stereotypes to think that each class doing its job means for them to merely be wisdom-loving, honor-loving, and gain-loving forces. Ferrari confirms it:

> For the just city is not presented as monolithic, unlike Athens, Thrace, or Egypt, but as divided into three classes of sharply divergent character. Indeed, it would be tempting to think of it as a city of Athenian rulers, Thracian soldiers, and Egyptian artisans and farmers. In other words, it is hard to resist asking, as Williams asks: Surely the individual ruler in the just city will have a soul led by its thoughtful part? Surely the individual soldier must have a soul led by its spirited part? And will the individual artisan or farmer not have a soul led by its appetitive part? But as it turns out, the analogy gives no answers to these questions.
>
> (2005, 43)

Since, to be sure, the Athenian ruler, the Thracian soldier, and the Egyptian businessman are monolithic characters, we find them all unjust—even the Athenian ruler, whose monolithic rationality would weaken their thymoeidic and epithymetic nature. *Ubi solitudinem faciunt pacem appellant*, here is a principle Plato's inner harmony could very well amount to, as Williams notes (2001, 163). Psychic justice would be a movement toward complete ascetism, toward a sort of psychic homogeneity where desires and emotions are either reduced to a minimum or turned logistic, just as civic justice would require either a very well tamed, and presumably small, epithymetic class, or one that is logistic and just.

But the truth is that no city is monolithic as the passages about the communal stereotypes seem to permit. In *Republic* VIII, Plato says there are as many types of human characters (εἴδη) as political constitutions and, therefore, the characters Plato expects to find in both city and soul are five: aristocratic, timocratic, oligarchic, democratic, and tyrannical, and not three: logistic, thymoeidic, and epithymetic (*Resp.* 544e).[7] The stereotypical manners (ἤθη) of communities do not reflect their character (εἴδη), i.e., their political constitution, although they certainly make it lean some way or the other. And this goes very well with their being stereotypes: they are true insofar as they reflect a sort of dominating force within the community, but false insofar as they present it as monolithic. Athens surely did not lack honor-loving and gain-loving people, just as Colombia does not lack people who dislike *arepas*. No community, just or unjust, is monolithic, just as no soul, just or unjust, lacks reason, spirit, or desire. This is evident in the fact that a city led by its appetitive part may be oligarchic, democratic, or tyrannical, a city led by its spirited part may be timocratic or democratic, and a city led by its thoughtful part may be aristocratic or democratic. There is no such thing as a logistic or thymoeidic character (εἶδος), although there certainly are logistic and thymoeidic manners (ἤθη) and, hence, characters ruled by logistic or thymoeidic forces. A democracy is the compromising regime ruled by all.

The task of a regime is to arrange the three forces and lay down the governing dynamics of their mutual relations. This is true of Callipolis as well as of the imperfect regimes. In the timocracy, for example, the rational element is not absent, it has just mixed itself up with the spirited one in order to counterbalance the growing influence of the productive forces. The timocratic society is afraid to appoint wise people to the highest positions—on the basis that they are no longer pure and earnest but mixed (μεικτούς, 547e)—and prefers those more spirited and simple-minded, better fit for war than for peace, that is, better fit to repress the productive classes. The rational element is then relegated from office and put to the service of the spirited one: prescriptions toward military excellence, such as the warrior-class' abstention from money-making activities, their communal meals, and devotion to physical training (547d), are still held good. The productive class is now a class of subjects and servants (περιοίκους τε καὶ οἰκέτας, 547c).

Similarly, oligarchic and democratic societies are not devoid of reason and spirit. In the oligarchy, the rational and emotional forces are at the service of the appetitive one: laws are first passed to determine a wealth qualification and then enforced through the arms of the state (βίᾳ μεθ' ὅπλων, 551b). The submission,

but not the banishment, of the rational and spirited parts is confirmed at the individual level: just as in the oligarchic city any legislative and military activity is performed for the sake of the accumulation of wealth (which by necessity implies the impoverishment and disenfranchisement of many people, 552a), in the individual both rational and spirited forces are "set beside, on the ground, one on either side, and enslaved (καταδουλωσάμενος)" (553d). This does not mean that reason will produce and stop reasoning, and spirit will produce and stop fighting, so that the soul becomes a sort of homogeneously appetitive entity. It means that neither will reason be allowed to reason about, nor spirit allowed to stand for, anything that is not related to money-making. In a similar fashion, the oligarchic state will educate people only insofar as their education contributes to economic growth, and train soldiers only insofar as they fight for the wealth of the nation and against the rebellion of the poor. The ultimate consequence of this process is that profound disenfranchisement which obliges the leading class to rule, fight, and produce (551e–552a), because it becomes incapable of making subalterns obey and of fighting against another state (551d–e). Democracy in its turn, the regime embellished with all the manners (πᾶσιν ἤθεσιν, 557c), is the compromise consisting in the distribution of a sort of equality among the forces, and the consequent emergence of all kinds of constitutions (πάντα γένη πολιτειῶν, 557d).

But this homogenization is not even completed by the tyranny, hard as it tries. Tyrants, to be sure, purge the wealthy, the brave, and the wise from the city. However, by doing so they are not really annihilating the rational and spirited elements but corrupting them to the point of turning the city into a dysfunctional whole, incapable of any collective action whatsoever. The first thing they corrupt is the city's productive forces by leaving the wealthy no option other than fleeing the country, while those who cannot leave are severely taxed and impoverished so they do not plot against them (566c–e). Later, they will even use expropriated resources as well as the city's sacred treasuries in order to not require more and more taxes (568d). Next, they corrupt the spirited element: since they do away with the bravest among those who share power, they are forced to enlist mercenaries and slaves as personal bodyguards (567d–e). Finally, they corrupt the rational element by doing away with those who dare tell them the truth, bringing flatterers to their side: the "wise" people tyrants associate themselves with, according to Euripides (568a).

Since the characters to be found in both city and soul are these five psychopolitical types (and the intermediates between them), and these are not monolithic neither in the individual nor in the city, it is a plain mistake to conceive of Callipolis as a city of Athenian rulers, Thracian soldiers, and Egyptian businessmen, that is, a city with a purely logistic ruling class, a purely thymoeidic army, and a purely epithymetic working class. Given the tendency to equate types and manners, this can only bring to mind a city where perfect philosopher-kings/queens rule, by means of an army of zealous timocrats, a class of potential tyrants. Plato does not want us to ask ourselves the misleading question "Does the individual ruler in the just city have a soul led by its thoughtful part?" for, since the answer is an easy "Yes," we feel entitled to further ask "Does the individual

soldier have a soul led by its spirited part?," the answer to which will now be a doubtful "Yes." But the answer goes from doubtful to completely baffling when we wonder if the individual artisan or farmer has a soul led by its appetitive part. Since the characters to be found are not logistic, thymoeidic, and epithymetic, of course "the analogy," as Ferrari puts it, "gives no answers to these questions." The question Plato asks himself, and expects us to ask ourselves, is whether the just city manages to implant, as far as possible, a just political constitution in each and every citizen, even the thymoeidic and epithymetic ones. The whole point of education and the rule of law is to found this political regime in citizens' soul, nurturing the best so they have a guardian similar to the philosopher's (590e–591a), that is, true opinion. So, if Plato so explicitly proposes a regime whose virtue is to encourage the emergence, care, and development of a just regime in each and every citizen's soul, we must not consider that by an epithymetic class' "minding its own" Plato means an epithymetic class ruled by their appetites, but an epithymetic class ruled by what in them is akin to wisdom, which is anyway embraced by their souls' rational part.

The mistake is, to a certain extent, encouraged by the passages about the stereotypical characteristics of communities, for Plato wants us to accept that the same regimes are to be found in both city and soul by adducing the fact—manifest in the existence of communal stereotypes—that the same elements are indeed found in both city and soul. But, given the tendency to overlap types and manners, regimes and elements, we are led to think that just means *logistic* and *Athenian*, while timocratic means *thymoeidic* and *Laconian*. Thus, Plato's just city appears a logistic, Athenian community that, nonetheless, is comprised of logistic, thymoeidic, and epithymetic classes. Then, since an angry crowd of sailors is to be sure a crowd of angry sailors (Williams 2001, 158), we rightly infer that it must be inhabited by a huge crowd of thymoeidic and epithymetic people. And finally—going now back from manners to types, from elements to regimes, we think ourselves entitled to infer that those thymoeidic and epithymetic citizens are timocratic (ruled by their spirit) and tyrannical (ruled by their appetites) and, therefore, thoroughly unjust. Precisely because to be thymoeidic is not a type of regime, the thymoeidic person is not by necessity ruled by their spirit, that is, is not by necessity a timocratic one. The logistic is not by necessity just either, or the epithymetic tyrannical. This is also evident by observing the strong emphasis on the virtues that accompanies Plato's analysis of the roles of the classes, that is, of the classes' "minding their own."

The Unity of the Virtues

Two important facts must be highlighted about Plato's inquiry into the virtues of the city. First, while wisdom is described as full-fledged knowledge, courage and moderation are described in terms of opinion: the preservation through everything of the true and legitimate opinion (δόξης ὀρθῆς τε καὶ νομίμου, Pl. *Resp.* 430b) about what is to be feared and what is not, in the case of courage; and the existence in both the ruler and the ruled of the same opinion (ἡ αὐτὴ δόξα) as to who

should govern (431d–e), in the case of moderation. Second, justice (the condition of everyone in the city minding their own) is what confers to each those powers, allows their emergence and once emerged, permits their preservation (433b).

These joint facts allow us to see how big a mistake it is to consider an epithymetic person unjust by default. That would be the case if the epithymetic is by necessity led by desire and, therefore, unjust and vicious. But as we saw, being epithymetic is a *manner* in cities (which comes from *like-mannered* souls), not a *type* of arrangement in cities or souls and, thus, it can be virtuous or not. Williams then errs when he says that "an epithymetic man—surely—is not a δίκαιος man" and concludes that the just city cannot make everyone just (meaning justice the same in both city and soul) (2001, 160).

But if the city's justice is what allows the emergence of a certain power in the epithymetic person, namely, their *doxastic* capacity to embrace a proposition about who should govern in the city and stick to it, then justice is—as Plato later confirms—the cause of the establishment in their soul of a political constitution equipped with a guardian and ruler similar to full-fledged reason (590e). For an opinion about who should rule within their soul will have been formed as well and, since moderation is a virtue that spreads itself across the whole inner citadel (432a), emotions will also adhere, and desires will allegedly follow. The epithymetic person is then moderate *simpliciter* (they will hold an internal agreement as to which element should rule), courageous insofar as their emotions ally with their true beliefs (they will be afraid of desires getting too strong, confident about their possessions being enough to guarantee their well-being, etc.), and wise insofar as in them true beliefs rule. It is the city's justice, then, that promotes their inner justice, the condition where true opinions rule, emotions enforce, prevent, and drive, and desires provide them with what they need to keep living, and living well: that is, the condition where each element does its own job.

That this condition is favored or affected by the political context the person lives in should not surprise anyone. Societies where consumerism is vastly encouraged, for example, tend to foster desire-satisfaction patterns of conduct. People attach well-being to material possessions and economic success. Since the person's entire belief-system revolves around this deeply ingrained, core belief (a belief, needless to say, at the service of the appetitive element), desires take control and channel all the intellectual energy to concerns on financial affairs and material possessions. Education will only be important insofar as it guarantees competitiveness in a job market and, therefore, financial stability and acquisitive power. Even if people are poor, they will think that they would be happy could they only afford all those things. Emotions rally now around desires, making people constantly fearful of losing what they have, of not having enough, of not having what others have, and erroneously confident about those things contributing to their happiness.

For thymoeidic people, the city's justice does the same as far as moderation is concerned. As for their courage, that they devote themselves to military service alone, with no meddling into private businesses or ruling activities, is intended to

favor the preservation of true beliefs about what is to be feared and what is not. These beliefs will be especially concerned with the most supreme of our fears, the fear a soldier needs most to master, the fear of death. The thymoeidic person should believe that the soul is the dearest of our possessions, prior to the body and immortal.

The relation between courage (and virtue in general) and the immortality of the soul is not pulled out of a hat. It is explicitly addressed in *Phaedo*. Is it not sufficient indication—asks Socrates—that a man is not a philosopher, but a lover of the body, that he gets vexed when he is about to die? Does not this person happen to be a lover of wealth and honor, of either of them or both? To be courageous and to consider death a great evil are incompatible things, for a person who considers death a terrible thing will only be able to face it if they are fearful of greater evils (like slavery or misery), and then they would be courageous because of fear (Pl. *Phd.* 68b–69d). Only by holding true beliefs regarding the soul, its priority to the body and its immortal nature, the thymoeidic soldier of Callipolis will be genuinely courageous, that is, will not face death as a result of exchanging fears for fears. To be sure, whereas a person's resentment to die indicates that they are ruled by honor or wealth and betrays, thence, a thymoeidic or epithymetic nature, this nature by itself does not condemn them to be ruled by honor or wealth and, therefore, to resent to die. For them courage can be fostered by a political regime that, through education and the rule of law (and because in such a regime they, as everyone, mind their own), nurtures true beliefs bringing courage.

Because it is tied down by Callipolis' education and laws, the soldier's courage is then a courage as it relates to the city (πολιτικήν γε, 430c). This *political* courage is not political because it is directed to a different object, as Ferrari thinks (2005, 44): both the philosopher and the soldier are supposed to face down and master the *same* fear, the greatest of our fears, the fear of dying, the latter through opinions inculcated by education and law (there lies its public character) and the former "instructed by his own powers of reason." This does not mean that they express different δυνάμεις either, for "not only through knowledge, but also through true opinion, human beings can be rendered good and useful to the cities" (Pl. *Meno* 98b–d).

Thymoeidic people in Callipolis are then moderate *simpliciter* (they will hold an internal agreement as to which element should rule), courageous *simpliciter* (they will hold true beliefs regarding what is to be feared and what is not), and wise insofar as in them true opinions rule. It is the city's justice, then, that promotes the soldier's inner justice, the condition where true opinions rule, emotions enforce, prevent, and drive, and desires provide with what they need to keep living, and living well: that is, the condition where each element does its own job.

That logistic people in Callipolis can be just seems easier to see, but a reply to Williams' argument calls for a more detailed description of their soul's inner workings. Let us recall that Williams points out a fundamental tension between the "whole-part rule" and the analogy of meaning: if everyone in the city is just then justice should mean different things in city and soul. Why? Because the just city contains epithymetic citizens, which are not just. By now, we have established

that this need not be the case, for epithymetic is not a type, but a manner in cities and souls that can be justly or unjustly arranged. But before that, we were confronted with two possible outcomes: either epithymetic citizens are not just (but then desires in the just soul need to be extirpated, annulled, or repressed), or epithymetic citizens are just (and then desires in the just soul have some λογιστικόν of their own).

Let's work on the first outcome: the just person, whether epithymetic, thymoeidic, or logistic, does not need to extirpate, annul, or repress the desires in them, they actually need them. Having observed the difference between types and manners, and how everyone in Callipolis may have in a qualified manner all the virtues, we can see how not even the logistic and just would have developed wisdom had the thymoeidic and epithymetic parts not done their own job and, conversely, how their thymoeidic and epithymetic parts would not have done their own had the person not been wise. This circularity is not vicious. For by having true beliefs ruling in the soul, that is, the element in us that is the smallest and judges not about a particular matter but about the city as whole, we can be called *wise*.[8] If these beliefs are tied down by the political regime and the surrounding education, culture, and religion (a regime, needless to say, designed and maintained by citizens of unqualified wisdom), we are certainly wise as it relates to the city (πολιτικήν γε). And if we reveal a philosophical nature, that very same condition will favor in us the development of full-fledged wisdom, which will make our virtue not dependent upon legal or pedagogical arrangements. At least not those of a particular city, but those of the cosmic city, for "there is a suchlike pattern laid up in heaven for him who wants to see it and who by seeing it turns himself into its citizen (ἑαυτὸν κατοικίζειν)" (Pl. *Resp.* 592b). We would now be fit to rule. The object of this knowledge, whether in cities or souls, and whether we have it in an unqualified way or only take part of it through education and law, is the Good, the good for whole communities with their logistic, thymoeidic, and epithymetic elements, both in relation to themselves and other communities (428c–d, 441e, 443e). It is a *koinoniology*, if I may coin the expression, and cosmos, city, and soul are for Plato κοινωνίαι (communities).

Let us now work on the second outcome: if epithymetic citizens are just, then ἐπιθυμίαι in the just soul should have some λογιστικόν of their own. I agree with Williams that, in a sense, we have reached here the limits of the analogy: we need, as it were, a more powerful magnifying lens. The letters in the city allow us to read the letters in the soul, but here we are trying to read the letters in the single ἐπιθυμίαι of the soul. The distinction between types and manners does allow us to establish something important in this respect: just as the epithymetic citizens are not logistic but nonetheless just, ἐπιθυμίαι in the just soul need not be thought as logistic: they can be thought as epithymetic in nature with no contradiction or tension whatsoever. The problem remains, however, of how ἐπιθυμίαι are tied up by true opinion and wisdom, for Williams is right to point out that, if we follow the analogy to the strictest detail, ἐπιθυμίαι should have some λογιστικόν of their own. A complete answer is not given in the *Republic*, but there is definitely an attempt to account for this in the *Philebus*, where Socrates distinguishes between

pain, the soul's perception of a bodily disintegration, and desire, the soul's longing for whatever thing would restore the balance (Pl. *Phlb.* 34d–35d). Connected as they are with previous recollections, i.e., the movements of the soul by which it brings to awareness, without the aid of the body, what it has experienced together with the body (34b), desires have a cognitive element and are, then, susceptible to the influx of reason. This is not the place to develop a full-fledged interpretation of the *Philebus* on desire, pleasure, pain, and cognition, but the answer to the last piece of Williams' puzzle is to be found there.

The Derivation Rules

It holds then with no contradiction that

1. a city is just if, and only if, its citizens are just, and
2. both the city and the citizen's being just consist in each part (reason, spirit, and desire) doing its job.

The solution ultimately depends on Plato's distinction between types and manners, which paves the way to an account of the unity of the virtues of Callipolis' non-logistic citizens. While to be wise, just, courageous, and moderate refer to different δυνάμεις within the soul, they are internally linked to each other in such a way that whoever has one has them all. Most of these virtues will be political (tied up by Callipolis' education and law). Book IV provides us with the model of such a unity and difference. Since Plato does not intend the rulers to merely be logistic, the soldiers to merely be thymoeidic, and the producers to merely be epithymetic, but everyone to be just, moderate, courageous, and wise, we can see that all of them, regardless of their manner, are of the same type. This path will remain hidden if we treat logistic, thymoeidic, and epithymetic natures as types and, therefore, as just or unjust by default.

Thus, what Ferrari calls the "three connected errors at work in the most recent scholarly literature" are not such (2005, 55). The *first* error concerns the whole-part and predominant section rules. By demonstrating how the analogy peers into the souls of Callipolis' citizens, I demonstrate that Williams' "whole-part rule," the rule that a city is F if, and only if, its citizens are F, does underlie the city-soul analogy. For it is by no means that the private and civic justice are mere homonyms (which, I have argued, condemns Plato to failure in pretty much every one of the *Republic*'s undertakings), but they rather refer to one and the same δύναμις in both public and private matters, namely, the capacity—whether doxastic or epistemic, it does not matter for practical purposes—to keep psychological forces apart, each one minding its own. All the citizens in Callipolis are then just *simpliciter*: in them, reason (by either endorsing true beliefs or engaging in active philosophy), spirit, and desire mind their own. The *second* error, to make the analogy peer into the souls of the members of the just city, is not a fruitless pretension. It is only a source of paradox given Williams' misunderstanding of types and manners, elements and regimes. The *third* one, Lear's error, is to refuse to accept

that the analogy is just an analogy, "insisting instead that it also links city and soul by causal relations" (Ferrari 2005, 55). But provided that the wisdom, courage, and moderation of both Callipolis' soldiers and producers—and, therefore, their justice—are such in relation to the city (which means that their source is true opinions tied down by legal and pedagogical arrangements), causal-psychological transactions between polis and psyche must be admitted to make sense of Plato's intentions.

Last, we may see that Williams' "predominant section rule," the rule that a city is F if, and only if, its leading, most influential, or predominant citizens are F, holds for Callipolis as well. A vast majority of citizens would never develop the virtues had the rulers not engaged in philosophy and, thus, had they not been able to set up laws and design an educational system fitting to that purpose. While this consideration may for some have totalitarian undertones (though I should say anti-Kantian: the autonomy of a pure practical reason is not precisely the value to be politically promoted), the factual truth is that most people would have never developed an awareness of, say, gender discrimination had a reflective system of values not been instilled, by means of law, education, and culture, at the collective level. Most people's virtue as far as gender discrimination is concerned does not really come as "instructed by their own powers of reason," but from true beliefs tied down by the political regime and surrounding culture. And yet most people's failure to appreciate subtle mechanisms of discrimination makes us feel that there are still so many things to do at every level: education, mass culture depictions of gender differences, law, etc. In this respect, as well as in many others, Plato is far more realistic than most philosophers, modern and contemporary. Besides, to deny the rule of predominance is to deny that "cities will have no rest from evils… nor will the human race" until "political power and philosophy entirely coincide" (*Resp.* 437d–e).

Notes

1 The term was coined by Daniel Devereux (see Ferrari 2009, 407, n. 1).
2 As an anonymous reviewer acutely pointed out, Williams might have quoted here Aristotle on πρὸς ἕν predication: if the city is just because it contains just citizens, then the meanings of justice in the city and justice in the soul are "systematically related, but they are not identical." A city and its citizens may well be just, but not because they instantiate the same εἶδος. The argument at 435e, again, would fail to back up Plato's "analogy of meaning."
3 I find rather strange that Ferrari cites 443c in support of the idea that justice in the city is an εἴδωλόν of justice in the soul. Of course, that would serve his point very well. But in 443c Socrates is clearly referring to the *one person one job* principle that initially drove the construction of the city in speech and that, now, is discovered to be an image of the real justice, expressed by the *everyone minding their own business* principle: "That it is correct for the shoemaker by nature to make shoes and to do nothing else, and for the carpenter to build, and the same for the others, that was a certain image of justice (εἴδωλόν τι τῆς δικαιοσύνης)—because of that it was useful." The *one person one job* principle is then an imperfect copy, an imitation of the *everyone minding her own business* one, which truly expresses justice in both the city and the soul.
4 Translations of the *Republic* are my own.

5 There is a sort of resistance to detect the city's civic sense of justice in the sphere of foreign affairs since Vlastos (1968, 665–674). See, for example, Hall: "Psychological justice… could not instantiate the social description of justice because of the different logical status of justice as applied to the individual and to the polis. Applied to the individual, justice as the social description is a relational predicate; applied to the polis, it is a one-place predicate" (1974, 433). Applied to the individual, the civic sense of justice is inter-individual; applied to the states it is not inter-state, but intra-individual! If the same power makes the soul privately and civically just, it should not be different for the city, whose inner harmony must reflect outwards in the form of harmonious foreign relations. No doubt this resistance comes from the drive to affirm the individual vis-à-vis the state or, rather, to not speak of the state as an individual. However, the *Republic* is in a way a reminder that states are subjects of certain psychological attributes, such as virtue and agency and, as such, they act (at least sometimes) as an individual. We may be reminded of Athens' tyrannical behavior in the context of the Delian League. If the city side of the analogy allows us to see in bigger letters the inner harmony that is justice, the soul side allows us to see in smaller letters its huge external effects.

6 Williams foresees these consequences in his critique of the analogy. If epithymetic citizens are not logistic and just, then what is the difference between epithymetic citizens in a democracy and in the just city? "Plato has to explain why the working class even in the good city has to be thought of as though they were potentially such persons [violent and passionate]." But if epithymetic citizens in the just city are less violent and passionate than in the democracy, "we are faced with the original problem once more, of what it was in those potentially violent persons that kept them in their place in the good city" (2001, 164).

7 "Do you realize, said I, that it is necessary that the *types* of ways for human beings (ἀνθρώπων εἴδη) are as many as [the *types* of ways] for constitutions? Or do you think that constitutions come to be out of oaks or stones, and not from the *manners* (ἐκ τῶν ἠθῶν) of those in the cities who, turning as it were the scale, drag otherwise?" (Pl *Resp.* 544d–e). The ways in which cities and souls are arranged correspond to the same *types* (εἴδη), and that is so because constitutions come from the *manners* (ἤθη) of the citizens. Or otherwise: since the same manners are to be found in both cities and souls, the same types of arrangements are to be expected in both. At the end of Book IV, right before the digression of the central books, Socrates has referred in a similar fashion to the types of constitutions in both cities and souls: "It seems to me… that there is one *type* (εἶδος) of virtue, but infinite (ἄπειρα) [*types*] of vice, and that there are four among them which are worth bearing in mind… As many as are the ways of constitutions that are worth a *type*, so many are the ways of the soul likely to be" (*Resp*. 445c).

8 It is worth noting that the ruling element does not need to be in full possession, but only *to take part* (μεταλαγχάνειν) of genuine wisdom. A particular feature of this kind of knowledge is to be concerned with the city as a whole (ὑπὲρ αὐτῆς ὅλης, *Resp.* 428d).

Bibliography

Ferrari, G. R. F. 2005. *City and Soul in Plato's Republic*. Chicago: University of Chicago Press.

———. 2009. "Williams and the City-Soul Analogy (Plato, Republic 435E and 544D)." *Ancient Philosophy* 29, no. 2: 407–13.

Hall, Robert William. 1974. "Plato's Political Analogy: Fallacy or Analogy?" *Journal of the History of Philosophy* 12, no. 4: 419–35.

Lear, Jonathan. 2001. "Inside and Outside the Republic." In *Essays on Plato's Psychology*, edited by Ellen Wagner, 169–201. Lanham and Oxford: Lexington Books. (First appeared in *Phronesis* 37 (1992): 184–215).

Sachs, David. 1963. "A Fallacy in Plato's Republic." *The Philosophical Review* 72, no. 2: 141–58.

Vlastos, Gregory. 1968. "The Argument in the Republic that 'Justice Pays'." *The Journal of Philosophy* 65, no. 21: 665–74.

Williams, Bernard. 2001. "The Analogy of City and Soul in Plato's Republic." In *Essays on Plato's Psychology*, edited by Ellen Wagner, 157–67. Lanham and Oxford: Lexington Books. (First appeared in *Exegesis and Argument*, edited by E. N. Lee, A. P. D. Mourelatos, and R. M. Rorty, 196–206. Assen: Van Gorcum, 1973).

9 Explanation in the *Phaedo*

An Argument Against the Metaphysical Interpretation of the Clever Αἰτία

Elizabeth Jelinek

Introduction

In a familiar passage in the *Phaedo* (96a–105d), Socrates inquires into the nature of αἰτία (explanation; Sedley 1998, 115–122; Fine 1984, 72, 91)[1] as part of the groundwork for his final proof for the immortality of the soul. He begins with an autobiographical sketch of the intellectual journey he undertook as a youth in search of an explanation of why each thing is generated, destroyed, and why it exists (*Phd.* 96a6–10, 97b3–7). Upon examining commonplace explanations, including those offered by the Presocratic natural philosophers, he judges such explanations to be inadequate because they fail to properly account for the phenomena they purport to explain. He concludes that the best type of explanation is the teleological one (Jelinek 2016, 99–103),[2] but unable to find anyone to teach him about this type of explanation, he embarks on a δεύτερος πλοῦς (second voyage, 99d9–c1) in search of an adequate type of explanation.

The first type of explanation Socrates develops on this voyage is his ἀσφαλὲς (safe) αἰτία (*Phd*. 100e1), which accounts for phenomena in terms of the theory of Forms. Rather than attribute an object's beauty to the physical features it possesses, as the natural philosophers might do, the safe αἰτία says that a thing is beautiful for no other reason than that it participates in the Form Beauty (100c5–e3). After introducing the safe αἰτία, Socrates says enigmatically that he has a new type of explanation that he claims is κομψοτέραν (cleverer, 105c2). In what way is the new type of explanation cleverer than the first?

There is much scholarly debate about how to understand the clever αἰτία.[3] Because the theory of Forms is central to Plato's metaphysics, most traditional commentators assume that Plato lacks the theoretical resources to conceive of the clever αἰτία as anything other than an explanation that accounts for phenomena strictly in terms of his theory of Forms. On this interpretation, which I will call the *metaphysical interpretation*,[4] the clever αἰτία is similar to the safe αἰτία in that it explains certain phenomena in terms of an entity's participation in a Form, but it differs from the safe αἰτία in that it invokes more than one Form. For example, rather than explaining that fire makes a body hot because it has the power to heat objects when it interacts with them in the sensible world, the metaphysical

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interpretation says that fire will make a body hot because of certain logically necessary relationships between the Forms in which fire participates.

The text does not reveal to us a definitive position on the role of Forms in the clever αἰτία. Nevertheless, any interpretation needs to render the clever αἰτία capable of completing the explanatory work necessary for Socrates' final proof for the immortality of the soul. I argue that the metaphysical interpretation does not do so adequately and thus we have reason to consider an alternative interpretation. On this alternative interpretation (e.g., White 1976, 129; Fine 1984, 95),[5] the clever αἰτία does not invoke Forms exclusively; it is a hybrid explanation that invokes both Forms and particulars as irreducible sources of explanation. Particulars, as White has argued, are neither Forms nor characteristics, and they include physical objects as well as numbers and souls (1976, 129). I show that such an interpretation of the clever αἰτία is consistent with the examples Socrates references in the passage and successful in providing a coherent reading of his final proof for the soul's immortality. Because the metaphysical interpretation renders the clever αἰτία incapable of explaining what Socrates needs it to explain, the principle of charity suggests that we give serious consideration to the alternative interpretation I offer here.

Part One

The Safe and Clever Αἴτιαι

In his exchange with Cebes towards an argument for the immortality of the soul, Socrates says, "It seems to me that if anything is beautiful besides the beautiful itself, it is beautiful for no reason… other than that it participates in that beautiful; and the same goes for all of them" (100c4–6).[6] Socrates refers to this type of explanation as the ἀσφαλὲς (safe) αἰτία. It answers the question, "Why is *x* F?" in terms of the theory of Forms: *x*'s being F is sufficiently explained by the fact that *x*, a particular, participates in the Form F. Thus, using the safe αἰτία, one would answer the question, "Why is Helen beautiful?" (for example), with the response, "Helen is beautiful because she participates in the Form Beauty" (Figure 9.1).

Socrates then shifts the topic of discussion to pairs of qualities that are opposite to one another, such as hot-cold, large-small, etc. He wishes to establish that, while it is possible for a particular such as Simmias to be both large and small (larger than Socrates but smaller than Phaedo), it is impossible for the Form Large to be both large and small. The Form Large "is not willing to … abide and admit smallness, and thus be other than it was" (102e3). In other words, the Form F is essentially F such that it can never be other than F.

Forms aren't the only types of entities that exclude one of a pair of opposites. There are also "things which although not opposites to each other, always have the opposites … [and] don't admit whatever form may be opposite to the one that is in them" (104b7–10; my interpolations).[7] For example, fire is not one of a pair of opposites. There's no such thing as the opposite of fire. But fire does have a quality, namely its hotness, for which there is an opposite, namely, coldness. A

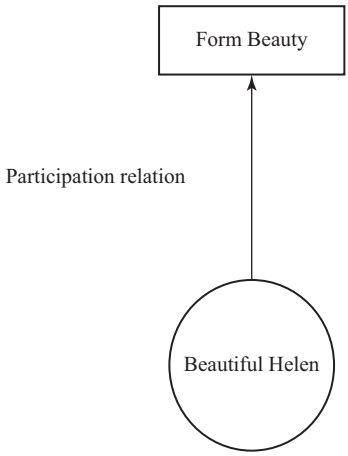

Figure 9.1 Helen participates in the Form Beauty.

particular fire is similar to the Form Hot in that neither will "abide by the opposites' attack" (104c9). The Form Hot will never "admit" coldness and still remain the Form Hot; similarly, fire is hot such that it will never "admit" coldness and still remain a fire. There's no such thing as a cold fire (Gallop 1975, 211). [8]

Particular fires are examples of "things that are compelled by whatever occupies them to have not only its own form, but always the form of some opposite as well" (*Phd.* 104d1–3). When fire occupies a body, it "brings" an opposite, namely hotness, to that body; it makes that body hot. Such entities form the basis of Socrates' clever αἰτία:

> If you were to ask me what it is, by whose presence in a body, that body will be hot, I shan't give you the old safe, ignorant answer, that it's hotness, but a subtler answer now available, that it's fire. And again, if asked what it is, by whose presence in a body, that body will ail, I shan't say that it's illness but fever.
>
> (105b8–c4)

It is important to note that when a fever occupies a body, the body does not merely *contain* a fever; the body becomes ill because of the fever. The body is fundamentally changed by the causal impact of the fever entering it (Gallop 1975, 214). This is relevant because, in addition to proving that the soul is essentially alive, Socrates wants to show that the soul has the power to bring life to the body it occupies, and that the body is fundamentally changed by this process:

> Tell me what it is, by whose presence in a body, that body will be living.
>
> Soul.

> […] Then soul whatever it occupies, always comes to that thing bringing life.
>
> (*Phd.* 105c9–d3)

Socrates' conclusion is not just about the nature of the soul; it is also about the condition of the body upon being changed by the soul. The body is "quickened" by the soul (Gallop 1975, 212).[9]

Using the clever αἰτία, Socrates accounts for two features of the soul and one feature of the body:

1a. The soul is essentially alive such that it does not admit death.
1b. The soul brings life to the body it occupies.
2. The body is fundamentally changed when a soul causally interacts with it; the body is quickened or enlivened.

The Metaphysical Interpretation

Proponents of the metaphysical interpretation hold that the clever αἰτία invokes Forms exclusively as sources of explanation. On this view it is assumed that in his discussion of hotness and fire Plato means to posit the existence of a Form Fire (*Phd.* 105b8–c2). While the safe αἰτία tells us that a particular fire is hot because of its participation in one Form (the Form Hot), the clever αἰτία explains that a particular fire brings heat to other particulars because the particular fire participates in the Form Fire, and the Form Fire entails the Form Hot (Vlastos 1969, 317).[10] In this way, the metaphysical interpretation of the clever αἰτία reduces certain properties of entities to their participation in Forms and the necessary entailment relationships among those Forms.

Vlastos, a proponent of the metaphysical interpretation, points out that the clever αἰτία needs to be able to account for a particular's capacity for acting in the sensible world (1969, 317–325). Socrates does not only need to prove that the soul is alive; he also needs to establish that the soul has the ability to make bodies alive. Thus, Vlastos suggests that entailment relationships among Forms have "causal implications" (1969, 319). In modern science, the law of gravity does not make things fall; it implies that if an object is dropped, then it will fall. Likewise, the Form Soul's necessary entailment relationship to the Form Life implies that, if a particular soul enters a particular body, then it will enliven that body. One might imagine the Forms as containing "instructions" that dictate how the entities participating in them behave (Prince 2013, 212; Strange 1985, 32–33).

Since Forms are eternal and "remain the same and never in any way admit of any change" (Pl. *Phd*.78d), it follows that the relationships among them must also be unchanging. Thus, proponents of the metaphysical interpretation are committed to holding that entailment relationships among Forms "express physical law[s] that [have] logical necessity" (Vlastos 1969, 320; my interpolations). Vlastos concludes that for Plato, "the laws of nature…have the same necessity as do the truths of mathematics and logic" (1969, 320). Along these lines, Shorey claims that the

whole passage is concerned with syllogistic inferences, not causal explanations (1933, 179), while Strange likens the clever αἰτία to Necessity in Plato's *Timaeus* and claims that the fact that "certain Forms import certain Forms and exclude others" has "consequences for the world of Becoming" (1985, 32–33). Similarly, Sedley argues that Plato is interested in the "logical or quasi-logical relation" of the cause to its effect, rather than "the process by which the cause acts" (1998, 115, 124). We can see that, according to the metaphysical interpretation, the clever αἰτία is not a causal explanation; it is a logical explanation with *causal implications*.

Objections to the Metaphysical Interpretation

First Objection to the Metaphysical Interpretation

My first objection to proponents of the metaphysical interpretation emerges from their reading of the fever example. Socrates says: "If asked what it is, by whose presence in a body, that body will ail, I shan't say that it's illness but fever" (105c3–4). The first part of the metaphysical interpretation of this passage can be represented in the following diagram (Figure 9.2).

A particular fever participates in the Form Fever. The Form Fever entails the Form Illness, thus, the particular fever also participates in the Form Illness. What does participation in the Form Illness mean for the particular fever? It cannot mean that the particular fever itself is ill, because the fever itself is not ill (Gallop 1975, 213). It means that particular fevers necessarily bring about illness. The particular fever is an example of a *bearer* (Pl. *Phd.* 105a4); it always brings about illness in the body it occupies. On the metaphysical reading, the particular fever's participation in two Forms (Fever and Illness), one which entails the other, is what accounts for the particular fever's ability to bring about illness in the sensible

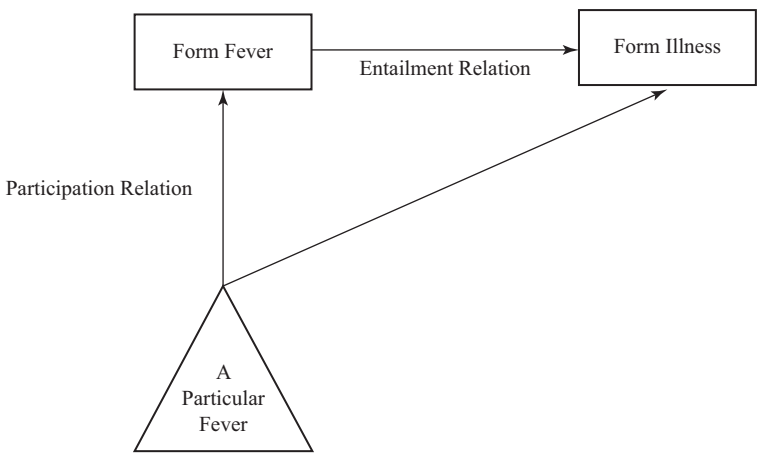

Figure 9.2 A particular fever participates in the Form Fever. The Form Fever entails the Form Illness.

world. The metaphysical interpretation denies that the particular fever possesses the power to exert causal efficacy on the body; rather, the causal relationship between the particular fever and the particular body is reducible to entailment relationships between Forms.

Suppose a fever occupies Socrates' body (Figure 9.3).

A particular fever makes Socrates participate in the Form Fever. The Form Fever entails the Form Illness. Thus, by participating in the Form Fever, Socrates also participates in the Form Illness. What does participation in the Form Illness mean for Socrates? It means that Socrates is ill.

Notice that both the particular fever and Socrates participate in the Form Fever (Vlastos 1969, 318–319),[11] and since the Form Fever entails the Form Illness, both the particular fever and Socrates also participate in the Form Illness. Herein lies a problem for the metaphysical interpretation. Participation in the Form Illness means something different for the particular fever than what it means for Socrates. In the case of the particular fever, participation and entailment relationships account for a fever's *ability to bring about illness*, but do not yield the conclusion that the fever itself is ill (since fevers are not in fact ill). This is not the case for Socrates. The same participation and entailment relationships do not purport to attribute to Socrates the ability to bring about illness in other bodies; rather, they explain that Socrates himself is now ill. The property of being ill is distinct from the ability to bring about illness, and yet both are explained in terms of a particular's participation in the Form Fever, the Form Illness, and the entailment relationship between the two.

Why is this problematic? Recall that proponents of the metaphysical interpretation contend that, since Forms are eternal and unchanging, entailment relationships among Forms must be necessary. Thus, the laws of nature have the "same necessity as the laws of mathematics or logic" (Vlastos 1969, 320). On this view,

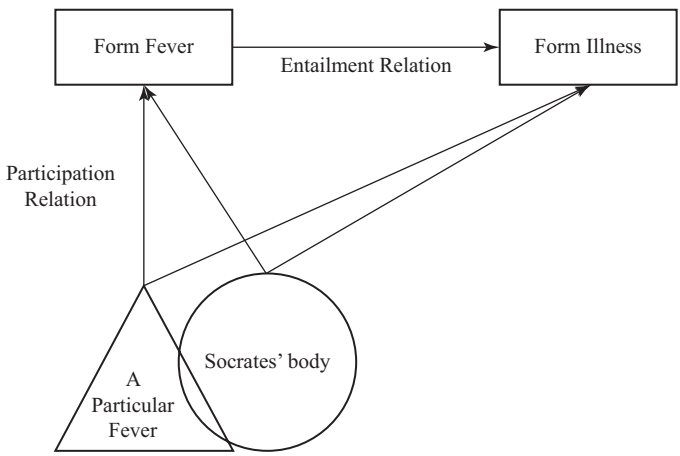

Figure 9.3 A particular fever occupies Socrates' body.

it is logically necessary that for all *x*, *x* is F if, and only if, *x* participates in the Form F (Vlastos 1969, 308–309). If an entity is ill, then it must participate in the Form Illness. Since the initial statement is biconditional, it is also the case that if an entity participates in the Form Illness, the entity must be ill. In the clever account I sketched above, both Socrates and a particular fever participate in the Form Fever. Since the Form Fever entails the Form Illness, both Socrates and the particular fever also participate in the Form Illness. According to the aforementioned biconditional statement, all things that participate in the Form Illness must be ill. Socrates participates in the Form Illness, and so Socrates must be ill. The problem is that while particular fevers also participate in the Form Illness, particular fevers are not ill.[12]

If, as proponents of the metaphysical interpretation claim, the relationships the clever αἰτία accounts for are logically necessary, then how could the same set of relationships yield two different results? This is tantamount to saying that it is a matter of mathematical necessity that when you add one thing to another thing, you will have two things, and then claiming that it is by virtue of this same mathematical principle that, in the special case of circles (for example), adding one circle to another circle will result in five circles. Of course, that is not only patently false, it is also absurd.

Second Objection to the Metaphysical Interpretation

A particular fever's participation in the Form Fever and the Form Fever's necessary entailment relationship to the Form Illness explains why a particular fever brings about illness. On the metaphysical interpretation, particular fevers *necessarily* cause illness—with the same sense of *necessity* as one would use in logic. But this is clearly false. Particular fevers do not cause illness under all possible conditions. Particular fevers exist only in the sensible world and they bring about illness only in mortal sentient bodies. Likewise, particular souls only bring about life in mortal bodies and only in the sensible world. If a particular soul were to occupy a clay pot, for example, it would not enliven that pot, and if a particular soul were to occupy a Form, it would not enliven that Form. Forms by themselves are unable to account for the fact that some states of affairs arise only under certain conditions, not only because relationships among Forms are logically necessary, but also because the conditions it would try to account for are ones that only obtain in the sensible world and cannot obtain in the world of Forms. In other words, Forms cannot support counterfactual conditionals. Thus, the following conditional statement, "If a soul enters a human body in the sensible world, the body is enlivened by it," cannot be captured exclusively in terms of participation in Forms and the entailment relationships between them.

Third Objection to the Metaphysical Interpretation

As I pointed out, the particular fever occupying Socrates' body is not itself ill; it is Socrates' body that is ill. Among other things, the clever αἰτία needs to account for the fact that the body is fundamentally changed by the causal impact of the

particular fever entering it. Likewise, Socrates' final proof does not merely show that the soul is alive; otherwise, there could be a live soul in a dead body. The final proof shows that the body is fundamentally changed when a soul causally interacts with it; the body is quickened or enlivened.

Since Forms cannot change (Pl. *Phd.* 78d1–8) nor can they be αἴτιαι of motion or change (Arist. *Metaph.* 988b3–4, 1075b27–28), neither Forms nor their logically necessary entailment relationships can explain the change that bodies undergo upon being occupied by souls. Thus, on the metaphysical interpretation, the clever αἰτία is incapable of accounting for the full extent of the causal story about the soul's and body's interactions with each other. Recall that Sedley claims, "What determines the success or failure of the candidate cause is…purely its logical or quasi-logical relation to the effect" (1998, 115). The problem is that Socrates doesn't just want to show that the soul, *by definition*, brings about life; he wants to account for the fact that the body is fundamentally changed by the soul. This is hardly a matter of logic. To use Sedley's own example, suppose the jury identifies me as the αἰτία or thing responsible for the murder. I agree with Sedley that the jury does not need to know exactly how I murdered the victim, and similarly, Socrates is uninterested in understanding the precise mechanism by which the soul enlivens the body. But how is it that I am *logically* related to the deadly effect? Perhaps, by definition, I am a murderous person. This alone will not suffice; the jury needs to establish that I engaged in a causal process and that the victim was murdered as a result, not just that I am by definition a murderous person. It is logically possible to imagine a murderous person who attempts murder but is unsuccessful. It is also logically possible to imagine a person who is not murderous (i.e., who lacks murderous intent) but who accidentally kills someone.

A key component of Socrates' account of the soul is that the body is ultimately changed by the causal process initiated by the soul. If the αἰτία bears merely a logical relationship to its effect as Sedley claims, then the explanation would be unable to account for the fact that the αἰτία is responsible for certain types of processes in the world and the effects of those processes. While it might be true that the soul is alive because of its participation in the Form Soul, the Form Life, and the necessary entailment relationship between the two Forms, stating that the soul when it enters a body will fundamentally change that body by enlivening it is to give information beyond what participation in Forms and the entailment relationships among them can offer.

Let us recap my three objections to the metaphysical interpretation:

1. If the clever αἰτία reduces physical laws to logically necessary relationships, then it should not be the case that the same logical entailment relationship yields two different results.
2. The examples of clever explanations Socrates gives are conditional statements (i.e., if a soul enters a body, and that body is a mortal sentient body in the sensible world, then the soul will enliven it), but Forms cannot support counterfactual conditionals.
3. Forms cannot account for change.

Thus, the metaphysical interpretation of the clever αἰτία leaves us with an explanatory gap because it cannot account for the fact that the body is changed by the soul.

Part Two

An Alternative Interpretation of the Clever Aἰτία

While I have argued that the metaphysical interpretation of the clever αἰτία is problematic, I am sympathetic to the intuition that the *Phaedo* passage demands some kind of explanation capable of accounting for regularities characteristic of the sensible world. Whenever fire enters a body, it causes that body to become hot. Whenever fever enters a body, it causes that body to become ill. An explanation that invokes general laws that apply to the sensible world is the type of explanation Socrates needs in order to establish that whenever a soul enters a body, it causes that body to become alive.

We might be able to account for these types of general laws if we adopt an alternative interpretation of the clever αἰτία. Perhaps we could understand the clever αἰτία as a "hybrid explanation" (Ferejohn 2009, 157)[13] that incorporates both Forms and particulars as irreducible sources of explanation. One part of the explanation invokes Forms. The soul is alive because it participates in the Form Life. The other part of the explanation accounts for causal interactions that cannot be expressed in terms of Forms. This component of the clever αἰτία attributes causal potency to the particular. Why is the soul alive? Because it participates in the Form Life. How is it that the soul enlivens a body upon entering it? Particular souls have the power to bring about certain effects when they interact with particular bodies. This power does not belong to the Form Soul.

On the interpretation I am considering here, the clever αἰτία serves a purpose. The safe αἰτία is already an adequate explanation of why fire *is* hot, but fire is not merely hot; it also has the power to ignite things. Forms cannot account for what happens when two particulars interact. The clever αἰτία explains this phenomenon in terms of the particular's ability to affect other particulars; thus, the *particular* has explanatory power, not just the Form. In this way, the clever αἰτία is, as Socrates calls it, "subtler"; it combines an explanation invoking Forms (fire is hot because it participates in the Form Hot) with an explanation invoking particulars (fire can make other things hot because of the power sensible fires have).

At first blush, a type of explanation that incorporates particulars as irreducible explanatory sources sounds un-Platonic. Indeed, this interpretation invites the following objections:

- Doesn't this interpretation anachronistically attribute Aristotelian efficient explanations to Plato?
- It is unlikely that Socrates would allow particulars to qualify as legitimate explanatory modes given his apparent rejection of the material explanations offered by the Presocratic natural philosophers earlier in the *Phaedo* passage.

- The claim that the clever αἰτία uses particulars as irreducible sources of explanation seems inconsistent with the mathematical examples Socrates discusses in the passage.

I address each of these objections in the sections that follow.

Possible Objections to the Alternative Interpretation

First Objection to the Alternative Interpretation

I proposed an alternative way of understanding the clever αἰτία according to which it is not reducible to an explanation in terms of Forms; rather, it is a hybrid explanation that gives explanatory power to both Forms and particulars and treats each as an irreducible source of explanation. I am not, however, making the anachronistic claim that Socrates' clever αἰτία accounts for change in terms of Aristotelian efficient causation. Socrates' clever αἰτία accounts for processes of change in a certain sense (i.e., when a soul enters a body, it enlivens that body). But unlike Aristotle's efficient αἰτία, Socrates' clever αἰτία is not intended to offer causal stories of event *tokens* (as opposed to types) at specific places and moments in time.[14]

Socrates does not need to explain how one specific soul (token) enlivens one specific body (token) in one specific location at one specific moment in time. All Socrates needs for his final proof is an αἰτία capable of offering accounts of *types* of causal events (Fine 1984, 90).[15] When souls enter bodies, they enliven or quicken the bodies. This tells us more information than the explanation that the soul is alive because it participates in the Form Life, and it does not attempt to account for an event-token, a specific soul entering a specific body at a specific moment in time. Socrates' clever αἰτία offers a general account of what happens when souls interact with bodies in the sensible world.

Second Objection to the Alternative Interpretation

Proponents of the metaphysical interpretation might object to the alternative interpretation on the following grounds. Prior to introducing the simple αἰτία, Socrates details his disappointment in the explanations offered by the Presocratic natural philosophers. He criticizes Anaxagoras for citing "air, aether, and water and many other absurdities" as the cause for "the ordering of things" in nature (Pl. *Phd.* 98c1). According to Socrates, Anaxagoras' explanation is as preposterous as saying that the reason Socrates is currently sitting in jail is because his bones and sinews are arranged in a seated position; "to call such things reasons is quite absurd" (99a5). Later in the passage, Socrates rejects the idea that an object's physical features, such as its "blooming color, or its shape, or something else like that" are what make it beautiful (100d1–3), or that part of a man's body (his head) is what makes him large (101b1).

Proponents of the metaphysical view interpret Socrates' criticism of these types of explanations as his wholesale rejection of particulars as legitimate candidates

for αἴτιαι. For example, Sharma claims that Socrates "wants to argue not simply that materialist explanations are crude or implausible but, even more strongly, that they are completely unworkable" (2009, 168). He concludes that Socrates abandons accounts of processes of "coming to be" and favors instead explanations that account for "being" in terms of the theory of Forms. Similarly, Bolton argues that Socrates rejects

> the possibility of a coherent physics, or science of nature, altogether, and turn[s] instead to the only subject which he is prepared to count as a genuine science that has anything to say about the αἴτιαι of coming to be: namely, what we now call metaphysics.
>
> (Bolton 1998, 93–94; my interpolation)

I argue that proponents of the metaphysical interpretation misunderstand what Socrates is objecting to. The items that Socrates says have been erroneously identified as αἴτιαι—air, aether, and water; bones and sinews; lovely color and shape; a man's head—are all particulars. I argue that particulars cannot be legitimate αἴτιαι for Socrates in certain explanations, namely those seeking to explain properties that are one of a pair of opposites, such as largeness and smallness or beauty and ugliness. In those types of explanations, the Form corresponding to the property in question is the ἀληθής (legitimate or true) αἰτία of the phenomenon in question. Particulars are not entities that have opposites (i.e., hot is the opposite of cold, but there is no opposite of fire), thus we cannot simply assume that there are Forms for such particulars. While others have made this point (Irwin 1999, 143–170; Nehamas 1973, 462–463), the implications of this line of interpretation have not been sufficiently drawn out. The uncertainty that there are Forms for these particulars leaves open the possibility that they can be legitimate αἴτιαι.

One such particular is a finger. In the *Republic*, Socrates explains why fingers do not qualify as one of a pair of opposites:

> Each one of them appears to be equally a finger, and in this respect it makes no difference whether it is observed as intermediate or at either extreme, whether it is white or black, thick or thin, or of any other quality of this kind. For in none of these cases is the soul of most men impelled to question the reason and to ask what in the world is a finger, since the faculty of sight never signifies to it at the same time that the finger is the opposite of a finger.
>
> (Pl. *Resp*. 523c9–d8)[16]

When you look at your finger, you can be confident that your observation is reliably reporting to you, "this is a finger." Socrates uses this example to illustrate the difference between two types of perceptual experiences. There are perceptions, such as our observation of a finger, that do not provoke the soul to question what it is perceiving because the perception itself is sufficient for the soul to understand "this is a finger." The soul receives the sensory data and can immediately affirm or deny this input without conducting any further conceptual analysis. In this case,

the finger itself is a legitimate αἰτία because it is sufficient for explaining what the item in front of you is.

By contrast, there are perceptions that "always invite the intellect to reflection because the sensation yields nothing that can be trusted" (523b3). Socrates calls these *provocatives* because "the perception no more manifests one thing than its contrary" (523c2). For example, when you look at your middle finger, your ring finger, and your pinky finger as they stand next to one another, your perception will give you two contradictory reports. It will tell you that your ring finger is both short (because it is shorter than your middle finger), and tall (because it is taller than your pinky finger) at the same time. In other words, the same thing (the ring finger) counts as evidence for both shortness and tallness. While your perception of your ring finger answers the question, "What in the world is a finger?" such a perception gives you conflicting reports about the nature of shortness and tallness. Because of this confusion, the soul cannot simply affirm or deny the report of the senses. It is compelled to analyze the perception further by using reason.

According to Plato, we cannot understand relative qualities (beauty, equality, etc.) unless we have access to some object that has that quality in an absolute, objective, and non-relative sense. That object, of course, is the relevant Form. While a sensible particular, such as a girl, can be both beautiful and ugly, the Form Beauty never changes; it is always eternally beautiful. Because Forms are free from the compresence of opposites (*Symp.* 210e5–211a5, *Hp. mai.* 291d1–3, *Cra.* 439d8–10, *Phd.* 100c–d), they can give you reliable information that sensory perception alone cannot. Forms are thus the only legitimate αἴτιαι for opposite or relative qualities (Irwin 1999, 161).

In the *Phaedo*, Socrates and Simmias observe that "equal stones and logs, the very same ones, sometimes seem equal to one, but not to another" (Pl. *Phd.* 74b7–9). A simple observation of a log will not tell you what equality is (Irwin 1999, 160–161). While Socrates' and Simmias' perception of the logs is not sufficient for understanding the nature of equal and unequal, it is sufficient for answering the question, "What in the world is a log?" One will never encounter an object that is both a log and not a log, or a finger that is a finger in some contexts but not a finger in others. Neither the log itself nor the finger itself confuses the soul, and thus there is no question of what they are (Nehamas 1973, 469). Particulars such as fingers and logs are clearly not members of a pair of opposite qualities or properties, and thus there is no reason they cannot qualify as legitimate αἴτιαι.

The view that Plato posits Forms for opposite or relative qualities has interesting implications for our interpretation of the clever αἰτία passage because it suggests that fire, fever, one, and soul are not necessarily Forms. Since hot is the opposite of cold, illness is the opposite of health, odd is the opposite of even, and life is the opposite of death, it is likely that there are Forms for these relative terms. But what is the opposite of fire? When we perceive fire, our souls are not confused as to whether the object before us is fire or not-fire, and thus there is no need for a Form Fire (Nehamas 1973, 482–483).

Recall that the metaphysical interpretation rests on the assumption that Socrates rejects particulars as candidates for legitimate αἴτιαι. Proponents of this

view conclude that, with the exception of the teleological αἰτία, Forms are the *only* legitimate αἴτιαι. If Socrates' discussion in this passage amounts to an objection to a small subset of explanations, namely those that invoke particulars as αἴτιαι of opposite qualities, then the option of using particulars as legitimate αἴτιαι for other types of phenomena remains available to Socrates.

In Part One, I argued that the metaphysical interpretation is uncharitable to Plato because it renders the clever αἰτία inadequate for what it needs to explain. Now, we have additional grounds for questioning the metaphysical interpretation, namely that it is unlikely that the only entities that figure in clever αἴτιαι are Forms (Gallop 1975, 198, 212).[17]

Third Objection to the Alternative Interpretation

One might argue that in the math examples Socrates offers in the *Phaedo* passage, he conceives of numbers as Forms. If this were the case, then one would have reason to doubt my claim that the clever αἰτία invokes explanatory modes other than Forms. Socrates says:

> Is there something else, which is not the same as the odd, yet which one must also always call odd, as well as by its own name, because it is by nature such that it can never be separated from the odd? I mean, for instance, the number three…
>
> (Pl. *Phd.* 104a1–3)

Proponents of the metaphysical interpretation assume that Socrates is referring to the Form Three rather than a set of three physical objects. The Greek in this passage could go either way: Socrates shifts from referring to "threeness" (τριάς) and "fiveness" (πεμπτάς) to "two" (δύο) and "four" (τέτταρα) within the same passage without mentioning any distinction between the two sets of terms (*Phd*. 104a4–104b2; see Gallop 1975, 201; Nehamas 1973, 487). Regardless, proponents would argue that Socrates is not interested in analyzing the *process* by which a group of objects becomes odd-numbered; he is simply stating a mathematical truth (Sharma 2009, 150). As such, he seems to be making a statement about being, not becoming. Thus, it appears that the references to math in this passage serve as counter-examples to the alternative interpretation of the clever αἰτία I am proposing in this paper.

I argue that this objection commits the fallacy of the false dilemma. It assumes that three is either the Form Three or a specific set of three physical objects. Neither option offers a plausible interpretation of the passage, and there is a third option available to us. As for the first option, it is clear that Socrates cannot be referring to the Form Three. Consider the following:

> These things too, it seems, don't admit whatever form may be opposite to the one that's in them, but when [their opposite] attacks, *either* they perish *or*

> they get out of the way. … Three will sooner perish…than abide coming to be even, while remaining three?
>
> (Pl. *Phd.* 104b8–c3; my interpolation)

Forms cannot "get out of the way," and they certainly cannot "perish," and thus it is unlikely that this passage is referring to the Form Three (Nehamas 1973, 485–486).

The difficulty with positing a Form Three is evident in other dialogues. Consider, for example, the description of the mathematician in the *Theaetetus*, who knows how great a particular number is because he knows how many units it contains (Pl. *Tht.* 198b8–c5). Does the Form Three, then, contain three units? This can't be the case, because Forms are indivisible (*Phd.* 80b1–6). In the *Cratylus*, Socrates says that the number ten would cease to exist if anything were subtracted from it (*Cra.* 432a5–b1). If numbers are Forms, then we must be able to subtract the Form of some number from the Form Ten. But of course, Forms cannot be added to or subtracted from one another (Rist 1964, 34).

There is evidence that numbers don't always refer to sets of physical objects either. In the *Phaedo*, Socrates has already criticized the idea that the physical juxtaposition or separation of entities is sufficient for explaining why there is a two-numbered set (Pl. *Phd.* 97a1–b1). But if numbers are neither references to sets of physical objects nor Forms, what are they? Plato gives us a third option. In the *Philebu*s, Socrates distinguishes between the popular mathematicians and the philosophical ones. Popular mathematicians can only conceive of numbers in terms of sets of concrete particulars, such as two armies or two oxen. By contrast, philosophical mathematicians conceive of numbers in the abstract (*Phlb.* 56d). In the *Republic*, Socrates makes it clear that numbers are neither physical objects nor Forms, but rather entities that exist between those two categories on the divided line. Philosopher-Rulers-in-training must abandon their reliance on physical representations of mathematical principles, and instead use their reason to generalize from these representations so that they can conceive of mathematics abstractly (*Resp.* 525c). In this way, the study of geometry will "draw the soul toward truth" by facilitating the soul's upward progression on the divided line (527b8–10). Plato seems to be conceiving of numbers as abstract entities that are not Forms (Rist 1964, 34–35; cf. Annas 1975, 146–166). Aristotle corroborates this interpretation when he describes numbers as "intermediates" for Plato (*Metaph.* 987b14–18).

If numbers are intermediates, then the number examples in the *Phaedo* no longer pose a problem for my proposal that the clever αἰτία invokes both Forms and particulars as irreducible explanatory modes. Recall that I am adopting White's characterization of particulars as including not only physical objects, but also non-Formal (in the Platonic sense) abstract entities, such as souls and numbers. On my interpretation, the clever αἰτία expresses general laws without invoking Forms exclusively. It is not unreasonable to interpret mathematical statements as among those general laws. Just as there is the general law that fire heats up bodies, and the law that souls enliven bodies, there is the general, universal law that three plus

three always equals six. On this interpretation, the number examples contribute to the explanatory effectiveness of Socrates' account of the soul in a way that the fire and fever examples cannot. Like fires and fevers, souls are not Forms; they are entities that bring about effects in the sensible world in regular law-like ways. But like numbers, souls, which are invisible, do not share the ontological status of visible objects. Socrates uses numbers as examples of non-physical non-Formal (in the Platonic sense of *Formal*) entities that are governed by general laws.

Concluding Remarks

In Socrates' discussion of the immortality of the soul, he refers to properties of the soul that could plausibly be explained in terms of Forms, such as the fact that the soul is alive. As I have pointed out, there is no warrant for assuming that in the *Phaedo* there are Forms for everything. The text only gives us warrant for thinking that there are Forms for opposites. Since *life* has an opposite, namely *death*, it is reasonable to conclude that there is a Form Life, and that it is by virtue of participating in the Form Life that the soul is alive. An explanation invoking Forms exclusively suffices for this because merely having the property of being alive is something that can be accounted for in terms of the language of *being*. But Socrates also explains that when a soul enters a body, it quickens or enlivens that body. This is a statement about the causal interaction in the sensible world between a particular soul and a particular body. It is a statement about *becoming.* I argued that such interactions cannot be explained in terms of Forms exclusively. As an alternative, I offered an interpretation of the clever αἰτία according to which it is a hybrid explanation that incorporates both Forms and particulars as irreducible explanatory components. This alternative interpretation attributes to Plato a more nuanced understanding of explanation than previously assumed.[18]

Notes

1 The Greek word αἰτία may be translated as *cause* or *explanation*, though these English translations do not quite capture the meaning of αἰτία as it is used in the *Phaedo.* My interpretation of αἰτία draws from both Sedley (1998) and Fine (1984). On my view, an αἰτία is a salient explanatory factor cited in an explanation.
2 There I offer an interpretation of what the teleological αἰτία is for Plato.
3 Plato does not use the word 'αἰτία' at 105c2. Instead, he uses the word 'ἀπόκρισις ' (answer). However, as I shall argue in this paper, the more refined answer Plato introduces at 105c2 is in fact a type of αἰτία that is cleverer than his first.
4 Proponents of this interpretation include, but are not limited, to Bolton (1998, 91–112); Burge (1971, 8–12); Sharma (2009, 137–177); Shorey (1933, 179); Strange (1985, 32–33); Taylor (1969, 45–46); Vlastos (1969, 291–325).
5 Many other scholars have offered variations of this alternative interpretation. The alternative interpretation I am endorsing in this paper is closest to White's.
6 All translations of *Phaedo* passages are Gallop's (1975) unless otherwise noted.
7 Some commentators (Keyt 1963, 168; Vlastos 1969, 299) claim that Socrates distinguishes between transcendent Forms (i.e., the Form Hot) and immanent characters (i.e., the hotness in a particular body). On this view, Forms are properties and

immanent characters are property instances. As Fine (1984, 107) points out, if this interpretation is correct then property instances, not properties, would be better candidates for αἴτιαι since they would be more explanatorily relevant. If Forms are not salient explanatory factors, then they would not qualify as αἴτιαι. Whether Socrates actually distinguishes between transcendent Forms and immanent characters is irrelevant to the interpretation I am offering in this paper. As I argue in endnote 17, the entities cited in clever αἴτιαι (i.e., fire, snow, etc.) are neither transcendent Forms nor immanent characters.

8 Gallop notes that the clever αἰτία gives sufficient but not necessary conditions (1975, 211). I agree, for it is true that fire is not a necessary condition for hotness. Friction can also cause hotness. Likewise, fever is a sufficient condition for illness but not a necessary one. Hypothermia can also cause illness. I am not claiming that fire is a necessary condition for hotness. I am claiming that hotness is an essential property of fire.

9 I explain the relevance of the body's physical change in Part One, "Third Objection to the Metaphysical Interpretation" (MS 10: 8–9).

10 Usually the word *entail* is a logical term used only in relation to propositions. Thus, a correct statement would be: The proposition "*x* participates in the Form Fire" entails the proposition "*x* participates in the Form Hot." I adopt Vlastos' looser use of the word *entail*. By saying that one Form entails another Form, Vlastos asserts that there is a necessary connection from one Form to the other (1969, 317).

11 Vlastos explicitly states that the body participates in both Forms.

12 The fever-ill example doesn't precisely parallel the soul-life pairing. While a fever itself is not ill, a soul itself is alive. In fact, none of the three examples (fire-hot, fever-ill, one-odd) match Plato's account of the soul exactly. Perhaps Plato uses each of the three examples to highlight only one specific feature of the soul. Like fires, souls are characterized by one of a pair of opposites. Fires are hot, the opposite of cold, and souls are alive, the opposite of dead. Similarly to both fires and fevers, souls have powers that enable them to fundamentally change the bodies they occupy. As I will argue in the penultimate section of this paper, the one-odd example shows that the types of particulars that figure in a clever αἰτία need not be visible objects, nor is it necessary that such particulars share the same ontological status as visible objects. Rather, the particulars invoked in a clever αἰτία could be intermediates. It is likely that souls, too, are ontologically on par with intermediates.

13 I am borrowing the term "hybrid explanation" from Ferejohn. Unlike Ferejohn, however, I do not cast Socrates' hybrid explanation in terms of Aristotelian αἴτιαι.

14 A *type* is a general category or kind of thing whereas a *token* is a particular concrete instance of that thing (Peirce 1906). For example, the northern hairy-nosed wombat is listed as "Critically Endangered" on the International Union for the Conservation of Nature Redlist of Threatened Species (IUCN 2022/Taggart, Martin, and Horsup 2016). The "Critically Endangered" designation applies to the species or type of wombat, not to an individual wombat. It is estimated that there are about 315 northern hairy-nosed wombats left on the planet (Queensland Government 2021). The previous sentence refers to 315 individual wombats.

15 Fine briefly mentions the distinction between types of events and tokens of events in her interpretation of the safe αἰτία. What I am doing here is different; I am invoking the type-token distinction in the context of the clever αἰτία.

16 All translations of the *Republic* are Shorey's (1933) unless otherwise noted.

17 Gallop's arguments for rejecting the existence of Forms for fire, snow, etc., are worth noting as well. At 106b6, Socrates speaks of the "hotness in fire." If one interprets both hot and fire as Forms, then one is committed to holding that the Form Hot is in the Form Fire. How could something non-spatial be inside another non-spatial entity? Perhaps one interprets both hot and fire as immanent Forms, in which case one would read the passage as "the immanent Form Hot is in the immanent Form Fire." The

same problem remains. It does not make sense to talk about immanent Forms within immanent Forms. Supposing the Form Fever is *immanent* in a particular fever is equally problematic. A particular fever, unlike a particular fire, is not a body; as such, it cannot house an immanent Form. Likewise, since a particular soul is not a body, it is difficult to see how it could contain an immanent Form. Socrates says that when snow encounters its opposite, fire, snow either "retreats" or "perishes" (106a3–10). It certainly cannot be the case that the Form Snow retreats or perishes when it encounters the Form Fire, because Forms are non-spatial and thus incapable of retreating or perishing.

18 I would like to thank Nickolas Pappas, Dan Linford, Jonathan Griffiths, Doug Reed, Colin Bunn, and Charlie Bloedorn for their comments on earlier drafts of this paper.

Bibliography

Annas, Julia. 1975. "On the 'Intermediates'." *Archiv für Geschichte der Philosophie* 57: 146–66.

Bolton, Robert. 1998. "Plato's Discovery of Metaphysics: The New Methodos of the *Phaedo*." In *Method in Ancient Philosophy*, edited by Jyl Gentzler, 91–112. Oxford: Clarendon Press.

Burge, E. L. 1971. "The Ideas as *Aitiai* in the *Phaedo*." *Phronesis* 16: 1–13.

Ferejohn, Michael. 2009. "Knowledge and the Forms in Plato." In *A Companion to Plato*, edited by Hugh Benson, 146–61. Malden: Blackwell Publishing.

Fine, Gail. 1984. "Forms as Causes: Plato and Aristotle." In *Mathematics and Metaphysics in Aristotle*, edited by Andreas Graeser, 69–112. Bern: Verlag Paul Haupt.

Gallop, David, ed. 1975. *Plato's Phaedo: Translation and Commentary*. Oxford: Oxford University Press.

Irwin, T. H. 1999. "The Theory of the Forms." In *Plato 1: Metaphysics and Epistemology*, edited by Gail Fine, 143–70. New York: Oxford University Press.

IUCN. 2022. "Northern Hariy-Nosed Wombat: *Lasiorhinus krefftii*." https://www.iucnredlist.org/species/11343/21959050. Version 2021–3, 2022. Based on the assessment by D. Taggart, R. Martin, and A. Horsup. 2016. *Lasiorhinus krefftii. The IUCN Red List of Threatened Species* 2016: e.T11343A21959050. https://doi.org/10.2305/IUCN.UK.2016-2.RLTS.T11343A21959050.en.

Jelinek, Elizabeth. 2016. "Is the Form of the Good a Final Cause for Plato?" *History of Philosophy Quarterly* 33, no. 2: 99–116.

Keyt, David. 1963. "The Fallacies in *Phaedo* 102a-107b." *Phronesis* 8, no. 2: 167–72.

Nehamas, Alexander. 1973. "Predication and Forms of Opposites in the *Phaedo*." *The Review of Metaphysics* 26, no. 3: 461–91.

Peirce, Charles S. 1906. "Prolegomena to an Apology for Pragmaticism." *Monist* 16: 492–546.

Prince, Brian. 2013. "Physical Change in Plato's *Timaeus*." *Apeiron* 47, no. 2: 1–19.

Queensland Government. 2021. "The Northern Hairy-Nosed Wombat: Monitoring and Management." Last updated 7 October, 2021. https://www.qld.gov.au/environment/plants-animals/conservation/threatened-wildlife/threatened-species/featured-projects/northern-hairy-nosed-wombat/monitoring-management.

Rist, J. M. 1964. "Equals and Intermediates in Plato." *Phronesis* 9, no. 1: 27–37.

Sedley, David. 1998. "Platonic Causes." *Phronesis* 43, no. 2: 113–32.

Sharma, Ravi. 2009. "Socrates' New *Aitia*: Causal and Metaphysical Explanations in Plato's *Phaedo*." *Oxford Studies in Ancient Philosophy* 36: 137–77.

Shorey, Paul. 1933. *What Plato Said*. Chicago: Chicago University Press.

Strange, Steven. 1985. "The Double Explanation in the *Timaeus*." *Ancient Philosophy* 5, no. 1: 25–39.

Taylor, C. C. W. 1969. "Forms as Causes in the *Phaedo*." *Mind* 78, no. 309: 45–59.

Vlastos, Gregory. 1969. "Reasons and Causes in the *Phaedo*." *The Philosophical Review* 78, no. 3: 291–325.

White, F. C. 1976. "Particulars in *Phaedo* 95e-107a." *Canadian Journal of Philosophy* 2: 129–47.

10 Aristotle's *De Caelo* Between Mathematics and Physics

Pierre Pellegrin

The first words of Aristotle's *De Caelo* include his cosmology within natural science (ἡ περὶ φύσεως ἐπιστήμη, 268a10). To what extent is the *De Caelo* a scientific treatise, and, more precisely, a treatise of natural science (physics)? This is the question I want to consider in this paper. According to the Aristotelian theory of science as described in the *Posterior Analytics*, this means that from undemonstrated principles are demonstrated some *per se* properties of the objects belonging to the genus proper to the science under consideration (e.g., *An. post.* 74b25). Such a genus is given and not demonstrated. In addition, demonstration should refer to the cause of the phenomena to be explained. Now Aristotle asserts that there are two ways of achieving such a scientific procedure in the physical domain: in the *Parts of Animals* he writes "there are two causes, namely necessity and the final cause" and a physicist should know both (*Part. an.* 642a1). There is a quaternary version of this dual description: at *Physics* II.7, for instance, we read "the causes being four, it is the business of the natural scientist to know about them all" (*Ph.* 198a22). Roughly speaking, there are two valid ways of doing physics according to Aristotle, one is formal and final, the other one material and mechanistic, the combination of the two being necessary for a "complete" physics. With these preliminaries in view, how should the practice of *De Caelo* be understood?

At the beginning of his commentary on the *De Caelo*, by way of a short doxography ranging from Alexander to "the divine Iamblichus" and "the great Syrianus and his followers" (Simpl. *in Cael.* 1.24, 2.10), Simplicius considers the "goal" (σκοπός) of the treatise since every work of Aristotle's "has a single subject dealing with one thing, in relation to which it weaves its parts together" (Simpl. *in Cael.* 3.14–3.16). While this is a position common to all the interpreters from Iamblichus onward, it may be difficult to apply to the *De Caelo* because it seems to be dismembered, so to speak, in two different enterprises: the first two books deal with the universe as a whole, and the last two with the four sublunary elements, fire, air, water, and earth. In the map of the physical research Aristotle proposes at the very beginning of the *Meteorologica*, in the phrase "the upper movement (φορὰν) of the ordered stars, and the corporeal elements, how many they are, their properties and how they change into one another" (*Mete.* 338a21), the first part certainly refers to the first two books of the *De Caelo*, whereas the

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second part seems to concern the last two books together with the *De Generatione et Corruptione*. This is possibly the reason for which "Alexander says that this treatise [sc. the *De Caelo*] is concerned with the cosmos and the five bodies within it, the celestial one and the four sublunary" (Simpl. *in Cael.* 3a10–12). But according to the later commentators there is one subject of the *De Caelo*, "the heavens properly speaking, i.e. the eternal revolving body," as Syrianus said (2.6–2.7).

Simplicius himself proposes a kind of synthesis of all those interpretations, noticing that, if Alexander seems right to consider that the *De Caelo* is about the universe and the elements, it says very little indeed on the universe, and it comes very quickly to the fifth element: quintessence (Simpl. *in Cael.* 6.11). Then Simplicius agrees with the other interpreters in saying that the first two books of the *De Caelo* make an implicit reference to the matter the celestial bodies are made of, i.e., the fifth element. It is therefore quite easy to attribute to the *De Caelo* a general theory of the physical bodies through a general theory of the five elements, which includes the fifth element as well as the four sublunary ones. The conclusion of this is that the Greek commentators, under different forms, think that the *De Caelo* belongs to a material and mechanistic physics and tackles the problem of the material composition of the world. We could support such a reading in considering that in Simplicius' commentary the καί is epexegitical in the following passage, the text meaning: "Alexander says that the treatise is about the cosmos, i.e. (καί) the five bodies, the celestial one and the four in the sublunary region, namely Fire, Air, Water and Earth" (1.11). If the *De Caelo* is, at least mainly, about the material composition of the universe, it is *ipso facto* a physical treatise.

This reading is far from being an absurd one. In effect, we can base the study of the cosmos on that of the five simple bodies. When the *De Caelo* explains that the universe is unique, eternal, spherical, finite, and with nothing being external to it, the text in fact considers the supra-lunary region and therefore the element composing this region (Simpl. *in Cael*. 3.22). Actually, if the universe is eternal and ungenerated, it is because the fifth element is also; if the universe is spherical it is because the fifth element has a circular motion; if the universe is finite it is because the elements are finite (Arist. *Cael.* I.6). It is not surprising that the *De Caelo* begins with the supra-lunary element, since the sublunary is dependent on the supra-lunary.

That the *De Caelo* is a physical treatise is apparent from another point of view in the enigmatic first chapter of the book. This chapter considers bodies from the point of view of their divisibility, whereas the next chapter considers their local mutability. This divisibility can be achieved according to no more than three dimensions. Simplicius raises a crucial problem in asserting that Aristotle does not give a mathematical demonstration of the fact that a body has no more than three dimensions, but establishes it through ἐπαγωγή (induction, *in Cael.* 9.28), whereas Ptolemy, in his treatise *On Diastasis*, gives a mathematical demonstration, namely that there cannot be more than three orthogonal lines intersecting at one point. This is also what Salviati says in Galileo's *Dialogue on the Two Great Systems of the World*. Modern commentators, Stuart Legatt (1995) for instance, have sometimes been

surprised that Aristotle neglects such a mathematical approach which would give his argument a real force. Actually, Aristotle had a very strong reason not to have recourse to a mathematical argument, which was of course within his reach, namely the doctrine of the incommunicability of the genus and, by the same token, of the sciences, according to which a physical proposition cannot be demonstrated on mathematical grounds. The very idea of mathematical physics is anti-Aristotelian.

To justify the proposition that bodies cannot have more than three dimensions, Aristotle invokes the special value of the number three in the Pythagoreans' speculations, in religious cults, and in the (Greek) ways of speaking, which say "all" when things are more than three. The conclusion of all this is that "among magnitudes, the body alone is perfect (τέλειον)" (Arist. *Cael.* 268a22). The perfection (τελειότης) of the body means that it cannot be the result of a division, whereas lines and surfaces can. Before this passage, Aristotle writes that we use the number three to worship the gods "having taken this number from nature as if it would be among its own laws" (268a13), an expression worth noticing, since Aristotle does not elsewhere use the word "law" (νόμος) except in a political context. And later he repeats: "in this domain, as we have said, we just follow the lead of nature herself" (268a19).

Incidentally, we should notice that Aristotle, after having said that all divisible magnitudes are also continuous, adds "whether we can also say that whatever is continuous is also divisible is not yet clear from what has been said until now" (268a29). But this has been shown at the beginning of *Physics* VI. Despite my reluctance to make chronological assumptions concerning the Aristotelian corpus, I must recognize that such a passage, in suggesting that the *De Caelo* (or at least its first chapter) is earlier than *Physics* VI, brings water to the mill of those who consider the *De Caelo* as an early work.

But the question is still unanswered: how do we know that natural bodies do not have more than three dimensions? We should remember what is said at *De Caelo* III.7, namely that the principles should be judged from their consequences and especially from their final result: "in a productive science, the final result is the product, and in the science of nature what is evident to perception (τὸ φαινόμενον…κατὰ τὴν αἴσθησιν) is always dominant" (306a16). As we do not have a perceptual experience of a body with more than three dimensions, this is enough to posit as a physical principle that the body cannot be part of a reality of more than three dimensions. Every body is therefore perfect (τέλειον), but some are more perfect than others. This is established in the last paragraph of the first chapter. This last paragraph, which is anything but mathematical, introduces the universe. Aristotle in fact introduces a new dimension, but of a different kind:

> Every body is perfect according to reason (κατὰ τὸν λόγον),[1] since it possesses every dimension, but each is limited by the part which is next to it by contact, for this reason each of the bodies is in a way many bodies. But the whole of which they are parts must necessarily be perfect (τέλειον) and must, as the term says, be complete in all direction and not only in one.
>
> (268b5–10)

In other words, Aristotle considers perfection as relative, which sounds like an oxymoron. Bodies are perfect because they are spatially determined wholes, but the universe is more than perfect because it is not limited by another body.

One of the basic assumptions of the scientific investigation in progress in the *De Caelo*, namely that the body has three dimensions, is thus grasped as a physical reality through perception. This is consistent with the theory of scientific knowledge as exposed in the *Posterior Analytics*. We are therefore definitely within the field of physical science.

Then comes the question of the fifth element. The Aristotelian universe is both perfect and hierarchical, and commentators are certainly right to consider that this universe undergoes two main "falls." One is the passage from the absolutely regular movement of the sphere of the fixed stars to the translation of the planets, the other the degradation of the supra-lunary into the sublunary. If there is any perfection in the Aristotelian universe, it is located in the upper region and comes from the upper region. Hence the importance of the question of the fifth element. In addition, if Aristotle is really concerned with a general theory of the material elements, the fifth element must be taken into account. The fifth element is, without any doubt, superior to the other elements, even if its superiority is relative. The cyclical transformation of the sublunary elements into one another is also a kind of perfection, comparable to that of animal reproduction, but the fifth element is more perfect because it remains eternally what it is.

Actually, the question of the fifth element is one of the most obscure in the Aristotelian corpus. It seems that the assumption according to which the supralunary region is made of a special substance is essential to Aristotle's cosmology and, more generally, to Aristotle's physics. Yet this question is only present in two chapters of the *De Caelo*, and even surreptitiously, and perhaps, as an allusion, once or twice in the *Meteorologica*. Aristotle tackles this problem in chapters 2 and 3 of Book I of the *De Caelo*, with an additional argument in chapter 4: the circular movement has no contrary. Many questions get no answer. Let us mention two of them.

In the sublunary region, one can consider that there is no elementary fire, air, water, or earth existing by themselves, but that the fire of a match is composed of a preponderant part of elementary fire, but mixed with some others components. Thus, any material object of this region is composed of several elements. But what about the fifth element in the supra-lunary region? Is it also mixed with other components? Probably not, in spite of the ambiguity of some passages in the *Meteorologica*. We shall return to this question later.

Hence the second question, even more difficult. If there is no void in the supralunary region, it should be filled with the fifth element in an unmixed condition. But should we think that the celestial bodies are composed of some fifth element more condensed than that of the spheres they are attached to, since these bodies are visible while the spheres are not? If so, should we consider that the fifth element is susceptible to variations in degree of concentration, that processes such as rarefaction and condensation are at work on it? But this would go against the simplicity of the fifth element, and chapter 4 of *De Caelo* seems to reject such a variation.

Whatever might be the answer to those questions, we face the same problem we have encountered in the case of the cosmos: does the *De Caelo* I propose a scientific, and more precisely a physical, approach to the fifth element? If this is the case, the genus this science is concerned with must be given, and not demonstrated, and some *per se* properties of this genus must be demonstrated through a physical demonstration. Let us first consider the existence of the fifth element.

As for the four sublunary elements, even if they do not exist in an unmixed form in our world, their existence is sufficiently established by our perception. But this is not the case for the fifth element. Therefore, commentators almost unanimously considered that, at the beginning of the *De Caelo*, Aristotle demonstrates the existence of a special fifth element of which the supra-lunary region is composed and the property of which is to be moved in a circle. If this is so, in no way can the fifth element be the genus corresponding to a science, precisely because no science demonstrates its own genus, grasping it from sense perception in the case of a physical science. But no demonstration of the existence of the fifth element can be found in the *De Caelo*, and we should, once more, rely on Simplicius, as does Catherine Dalimier in a remarkable article (2000).

According to Simplicius, Alexander changed the epistemological status of Aristotle's argument:

1. "if ever (εἴπερ) there is a simple motion, and if the motion of a simple body is simple, then it is necessary that the body naturally moved according to a circular motion be simple" (based on Arist. *Cael.* 269a3–7);
2. "since (ἐπεὶ) the circular motion is simple and since a simple motion is that of a simple body, necessarily a simple body which is moved in a circle exists." (Simpl. *in Cael.* 18.5–8, 10–12)

Rather than an implicative argument (1), Alexander proposed an inferential argument (2). As the good grammarian she is, Dalimier describes this modification as the transformation of a connective proposition (εἰ, εἴπερ) into a sub-connective one (ἐπεί). To get a full understanding of this, we certainly should refer to her edition of Apollonios Dyscolos' treatise *On conjunctions* (Dalimier 2001). In an implication such as that expressed by a connective proposition, the necessity concerns the consecution of the two terms (necessarily if p, then q), whereas in an inference, as expressed in a sub-connective proposition, the necessity is transferred from the antecedent to the consequent (if p is true, necessarily q is true). Sub-connective propositions are therefore more adapted to posit the existence of the terms they are concerned with.

Of course, Aristotle thinks that the fifth element does exist, and Simplicius does know that, but Simplicius' argument should be completed. He says that Aristotle "propounds his argument hypothetically because of philosophical caution" (Simpl. *in Cael*. 18.15). There is a stronger reason for this hypothetical form: the genus a science is concerned with cannot be demonstrated. But this raises a new problem: in the case of the fifth element, does Aristotle propose a kind of hypothetical physics, as some Epicureans later did?

In fact, we can avoid such an anachronistic approach if we come back to *De Caelo* III.7. Aristotle, against Plato's theory of the material composition of bodies, affirms not only that perception is the ultimate and supreme judge, but also that the principles (or at least the physical principles, since this is not true for mathematical principles) should be considered as valid according to the consequences coming from them, those consequences being judged by perception. Robert Bolton convincingly shows that there is a hierarchy between two approaches: (i) if the principles are based on sense perception, we have a "strong" physics; (ii) if the principles have what could be called a "logical foundation," i.e., if they are based on some kind of logical argument, we have a "weak" physics; in Bolton's view both physics are valid (2009).

Now Aristotle concludes the existence of the fifth element by means of an argument, which is, roughly speaking, like this. If natural places do exist, natural and contra-natural motions also exist; but natural places actually exist, because the world, with the earth as its center, is a finite sphere divided into supra-lunary and sublunary regions. Therefore, there must exist an element the property of which is to be moved by a natural circular motion. Of course, fire or another element could also be moved in circle, but when this happens, this motion is not natural because it requires an external force to be effective, and it is not continuous. But the motion of the heavens is continuous and eternal. "From this it is clear that there is some body which is different than the substances of our region, prior to them and better than them" (Arist. *Cael.* 269a30). The thesis that Aristotle establishes most firmly is that the body moved in a circle according to a natural motion must be simple. At the end of chapter 2 he finds it "convincing" (πιστεύσειεν) as the result of "reasoning" (συλλογιζόμενος) that such an element does exist (269b14). All this does not result in a demonstration of the existence of the fifth element and is clearly a procedure falling under what has been called a weak physics, i.e., one based on reasoning instead of sense perception.

Grasping without demonstration the fifth element as a genus with which the cosmological research is concerned, the science of cosmology is here in a good position to demonstrate the *per se* properties of this genus. In the third chapter of Book I, Aristotle establishes that the fifth element is neither light nor heavy, that it cannot be increased or diminished, that it is ungenerated and incorruptible. The vocabulary is remarkable: "If what has been said is correct, some propositions being assumed (ὑπόκειται) and some others demonstrated (ἀποδέδεικται) [...] it is equally reasonable to assume (ὑπολαβεῖν)" that this body will be ungenerated and incorruptible (269b18, 270a14–15). The verb ὑπολαμβάνω does not here mean "to assume without demonstration," but to assume by relying on something undemonstrated:

> Now the motions of contraries are also contrary. If, then, this body cannot have a contrary, because there is no motion contrary to the circular motion, nature has justly exempted from contraries what is ungenerated and incorruptible, for it is in the domain of contraries that generation and corruption take place.
>
> (270a17–23)

Nevertheless, Aristotle's cosmology is not deprived of any perceptual basis. Otherwise, it could not be considered a physical theory. Might we consider that the fact that the circular motion of the heavens, and especially that of the sphere of the fixed stars, is grasped by perception provides sufficient scientific and physical basis to Aristotle's speculation on the fifth element? This is what Thomas Aquinas seems to do. Aquinas is without a doubt an "existentialist" just like Alexander, and he thinks that at *De Caelo* I.2 (269a2) Aristotle proves the existence of the fifth element. This is what Aquinas says in his commentary on this passage: "Therefore it is necessary that there exist (*esse*) some other simple body, which moves naturally according to a circular motion" (*In De cael.* I.4.1). But, when considering the second argument offered by Aristotle in *De Caelo* I.2 to establish that a natural circular motion is that of a simple body, Aquinas rightly says that this argument is based on two principles: (i) contra-natural motion is contrary to natural motion; (ii) anything has but one contrary. But he adds: "Yet, it is appropriate to assume also a third principle, visible through sense, namely another body that exists (*esse*) in circular motion" (1.4.6). These chapters are therefore reintegrated in the Aristotelian epistemological orthodoxy, since it is because we see a celestial circular motion that we establish the existence of an element with a natural circular motion.

As a matter of fact, before any demonstration, a science should, according to Aristotle, posit the existence of the genus with which it is concerned, this existence being based on sense perception. Senses perceive that there are celestial bodies with a circular motion, especially those located on the sphere of the fixed stars. For we should notice that, when we consider the planets, perception grasps them as wandering stars (ἀστέρες πλανῆται), and Eudoxus and Callippus' constructions are needed to make their orbit a composition of circular motions.

If we now come back to the properties of the fifth element, as a scientific inquiry should do (leaving aside the question of the variability in the concentration of the fifth element), Aristotle demonstrates that this element is simple and pure. It is worth noticing that, here also, there is a kind of competition between mathematics and physics, especially as the current term in ancient Greek to designate the astronomers is μαθηματικοί. For, in *De Caelo* I.2, Aristotle gives four arguments in favor of the simplicity of the fifth element. But before these arguments, he proposes a kind of conceptual framework, also in four steps:

1. Natural bodies are movables.
2. There are two local motions which are simple, motion on a straight line and circular motion, because the line and the circle are the only simple magnitudes.
3. Definition of circular and straight motions relative to up and down: all simple motions either go towards the center, or away from the center, or around the center (*Cael.* 268b22).

Aristotle offers an additional proof for the fact that there are only three simple motions: "this seems to be in exact agreement with what has been said before" about the privilege of the number three. The point of reference of all these

motions is the center of the universe. We have here a crucial turning point in the argument, because Aristotle clearly makes a move from mathematical considerations to a physical analysis. For mathematicians, indeed, there are but two simple motions, since the straight motion up and down is one and the same motion, but this is not the case in a cosmological, i.e., physical, perspective since there are three simple motions for the physicist, i.e., three simple motions really existing in nature: 1) straight upward motion; 2) straight downward motion; 3) circular motion. There is here an interesting point in Simplicius' commentary: Simplicius reports that Xenarchus of Seleucia, in his book *Against the Fifth Essence*, says that the straight line and the circle are not the only simple lines, because the helix on a cylinder is also simple, "since every part of it is congruent with any other part equal to it" (Simpl. *in Cael.* 13.25). But this is an unsound reproach addressed to Aristotle, because Xenarchus applies a mathematical point of view to physical realities. And this is exactly what Simplicius reproaches Xenarchus for, but not specifically on this point: "finally, on those subjects, Xenarchus should be blamed because he applies mathematical demonstrations to physical subjects" (25.11).

4. There is a second way to decide whether a local motion is simple or compounded, namely whether it is the motion of a simple or of a compound body.

The mathematical (geometrical) approach, which can be found in the second step, could be formalized by the following syllogism:

- The only simple lines are the straight line and the circle.
- A simple motion is the one which has a simple trajectory.
- A simple motion is a motion on a straight or circular line.

The next two steps, on the contrary, do introduce a new perspective which is a cosmological, i.e., a physical one. It is no longer a question of linear or circular motions *simpliciter*, but of those motions as related to the center of the universe. The very notion of *simple motion* becomes a physical one.

We should notice, even if this adds an aporia to an aporia, that the fourth step raises very difficult questions which have been mentioned by ancient commentators. It is very difficult, for instance, to utilize and even to understand Aristotle's definition of a simple body: "I call simple bodies those which possess a principle of motion in their own nature, such as Fire and Earth, their kinds, and whatever is akin to them" (*Cael.* 268b27). The phrase "their kinds, and whatever is akin to them," which Alexander and Simplicius interpret in different ways, makes some sense only if *simple* is used in a loose way, meaning that a simple body is in fact a homogeneous body. Thus, according to Simplicius, sand, which is mostly composed of earth, may be considered a simple body. Averroës, in his *Great commentary on the De Cælo*, is probably right, from an Aristotelian point of view, to understand "a principle of motion" as meaning "a single principle of natural motion" (*Comm. magnum de Caelo* I.7.12). But some questions remain

unanswered, for example: one can say that the motion of a simple body is simple, but can one also say that the motion of a compound body is *necessarily* compound?

But, in spite of those difficulties with this fourth approach of a simple motion, we are definitely within the field of physics. We should understand that the natural local motion of a simple body is simple, for nothing prevents a stone from having a circular motion (in a sling for instance). But this motion will be against nature and this will not entail that the stone is a simple body. The entire argument is based on the not yet formulated doctrine of the natural places, a doctrine which is cardinal in the *De Caelo* and which is, for sure, a physical doctrine. But that a simple motion be in a straight upward or downward or circular motion is only a *nominal* definition, i.e., it does give the cause of the *definiendum*. For, it is not because a motion is rectilinear or circular in this way that it is simple, but rather because a motion is a natural motion of a simple body that this motion is simple. Actually, the fact that the trajectory of a simple motion is either linear in the two ways mentioned or circular is a *per se accident* and not a part of the essence of a simple motion, and, as such, is demonstrated from the essence expressed in the definition: since the essence (definition) of the simple motion is "natural motion of a simple body," and since a simple body naturally goes in a straight line up or down or is moved in a circle, consequently the trajectory of a simple body is either linear in both directions or circular.

We may conclude from all that has been said that the *De Caelo* certainly meets the requirements of a scientific treatise, in the Aristotelian sense of *scientific*. In addition, it is without any doubt a physical treatise, and this is probably one of the reasons for which there is almost no astronomy at all in a book entitled *De Caelo*, since astronomy is a science subordinate to mathematics, even if it includes some physical points of view. More specifically, what is at issue in the *De Caelo* is mainly the elementary composition of the universe.

Note

1 This κατὰ τὸν λόγον is interpreted by Simplicius as meaning "according to the definition," namely the definition of the body as every-dimensional. But it could also mean that a body can be conceptually separated from the adjacent bodies in nature.

Bibliography

Aquinas, Thomas. 1952. *In Aristotelis Libros De Caelo et Mundo Expositio*. Edited by Raimondo M. Spiazzi. Torino: Marietti.

Averrois Commentaria Magna in Aristotelem De celo et Mundo. 2003. Edited by Francis J. Carmody. Leuven: Peeters.

Bolton, Robert. 2009. "Two Standards for Inquiry in Aristotle's *De Caelo*." In *New Perspectives on Aristotle's De Cælo*, edited by Alan C. Bowen and Christian Wildberg, 51–82. Boston: Leiden.

Dalimier, Catherine. 2000. "Les enjeux de la reformulation syllogistique chez les commentateurs grecs du *De Caelo* d'Aristote." In *Le Commentaire entre tradition et*

innovation: actes du colloque international de l'Institut des traditions textuelles, edited by Marie-Odile Goulet-Cazé and Tiziano Dorandi, 377–86. Paris: Vrin.

———, ed. and trans. 2001. *Appolonius Dyscole, Traité des conjonctions, Introduction, texte, traduction et commentaire*. Paris: Vrin.

Leggatt, Stuart. 1995. *Aristotle, On The Heavens I & II*, with an Introduction, Translation and Commentary. Warmonster: Aris & Phillips.

Simplicii in Aristotelis De Caelo Commentaria. 1893. Edited by I. L. Heiber. Berlin.

11 Aristotle's Critique of the Atomists' Proof of Indivisible Magnitudes

Fred D. Miller, Jr.

Generation and Corruption I.2 is an important source for the ancient atomists and also for Aristotle's own views concerning indivisible magnitudes. The overall argument of this chapter is plain enough. Continuing from the preceding chapter, a discussion, based on his predecessors' opinions, as to whether or not coming-to-be and perishing consist in aggregation and segregation, Aristotle here focuses on whether or not the aggregation and segregation in question involve indivisible magnitudes (*Gen. corr.* 315b24–8). After ruling out Plato's alternative account, he turns to the explanation offered by the atomists. He presents a proof of the existence of indivisible magnitudes: in brief, a body must be composed of indivisible magnitudes because it can never be divided up everywhere. He then restates the proof showing how it can be strengthened, but finally claims that it is fallacious. He concludes that coming-to-be and perishing should be explained instead in terms of his own hylomorphism. In detail, however, the chapter presents serious challenges. Commentators offer different interpretations of the overall argument, some even confessing they do not understand what Aristotle's main point is supposed to be. None of them, arguably, succeeds in tying the various strands of his argument together. Another obstacle to understanding his argument has been the imprecise and inconsistent translation of key terms. The purpose of the present essay is to offer a more satisfactory interpretation of Aristotle's argument, drawing on an insight of the ancient commentator Philoponus.[1]

Aristotle prefaces his discussion by distinguishing opposing theories of indivisible magnitudes: that they are plane figures such as the triangles according to Plato or atomic bodies according to Democritus and Leucippus. After some perfunctory criticism of Plato, Aristotle fixes his attention on the atomists. The initial argument for atomism takes the form of a puzzle (ἀπορία) involving the thesis that it is possible for a magnitude to be divided up everywhere (316a14–16). This puzzle constitutes the atomist's proof that there must be indivisible magnitudes. Although Aristotle expresses the argument in his own terms, it is plausible to suppose that it derives from the atomists themselves as well as Zeno's paradoxes. The atomists argue that since a magnitude cannot be divided everywhere it must be composed of indivisible magnitudes, but Aristotle maintains that the latter leads to impossible consequences, alluding to arguments elsewhere (316b14–17; see

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also *Cael.* III.4.303a3–24; *Ph*. IV.1.231a21ff; *Lin. Ins.* 969b29ff). The puzzle concerning divisibility is his concern here and will be the subject of this paper.

In order to follow Aristotle's reasoning, it is necessary to pay close attention to his terminology. Consider first his statement of the puzzle:

> There is a puzzle if one supposes that a given body (σῶμα) and magnitude (μέγεθος) is divisible (διαιρετόν) everywhere (πάντῃ) and this is possible (δυνατόν). For just what will there be that escapes the division?[2]
>
> (*Gen. corr.* 316a14–17)

It should be noted that the puzzle concerns the divisibility of a *body* (σῶμα), since the atomists wish to establish the existence of atomic bodies. Bodies are spatiotemporal objects with attributes such as heaviness, as contrasted with planes, which Aristotle regards as mere abstract objects. Further, the puzzle is concerned with a body insofar as it possesses *magnitude* (μέγεθος), i.e., size, in respect of which it is divisible in all three dimensions. The term translated "divisible" here is διαιρετόν, although it could be translated *divided*. For Aristotle will later point out that a thing may be διαιρετόν either in potentiality or in actuality (316b21). This suggests that διαιρετόν can mean *divisible* or *divided*. However, Aristotle adds "and this is *possible* (δυνατόν)" (316a16), which effectively removes the ambiguity. He is saying, in effect, "and I *mean* 'divisible'."[3] Finally, the puzzle concerns whether the magnitude can be divided *everywhere* (πάντῃ, rendered "through and through" by Joachim). This term is deliberately vague and, as will be seen, the validity of the proof of individual magnitudes hinges on how it is made more precise.

Aristotle now begins to discuss why it is puzzling to claim that a body is divisible everywhere. First, he explains what the claim implies:

> For if [a body or magnitude] is divided everywhere (πάντῃ διαιρετόν), and this is possible (δύνατον), this might at the same time have undergone division everywhere (πάντῃ[4]), even if it has not undergone division at the same time (ἅμα). And if this were to come about there would be nothing impossible (ἀδύνατον).
>
> (316a17–19)

A couple of remarks are in order. First, Aristotle again adds "and this is possible" (δύνατον). He says in the *Metaphysics* Θ.3 that it is possible (δυνατόν) for a thing to Φ if there will be nothing impossible (ἀδύνατον) in its actually Φ-ing (*Metaph*. 1047a24–6). This seems to be what he means in the passage from *Generation and Corruption*, since he mentions here too that nothing impossible follows if the division has actually been completed. As previously mentioned, this is added confirmation that διαιρετόν means, in effect, *divisible*. Second, when Aristotle says that the body might have undergone division *everywhere*, even if it has not undergone division at the same time, he seems to mean that the body could end up being completely divided up at some time even if the divisions have taken place

at different times. That is, the claim is concerned with the outcome of the division and not with how it takes place. This is clearer if πάντῃ is read at *Generation and Corruption* 316a18. Otherwise, the statement seems self-contradictory. The term ἅμα (literally *together*) is translated "at the same time." This has a wider sense than *simultaneously*, which would usually imply events occurring at the same instant.

Aristotle then continues:

> Therefore, if—whether at the midpoint in like manner or generally [i.e., at any point]—it is effectively divided (διαιρεθῇ) (if it is naturally divisible everywhere), nothing impossible will have come about; since, even if ten thousand [things] have undergone division (διῃρημένα ᾖ) ten thousand times,[5] [there would be] nothing impossible; and yet, perhaps, no one would effectively divide it.
>
> (*Gen. corr.* 316a19–23)

In this passage the verb διαιρεῖν appears in the passive voice in two different tenses: perfect and aorist. The perfect, translated "to have undergone division" (διῃρημένα ᾖ), indicates a process of division which has been completed. The aorist, translated "to be effectively divided" (διαιρεθῇ), indicates a *fait accompli* without regard to any process that brought it about. The point here is that since a magnitude could undergo millions of divisions, it could in principle be divided up without remainder, even if no mortal could bring this about.

This observation provides the basis for the next crucial step: "Since, therefore, the body is of this sort (τοιοῦτον) everywhere, let it be effectively divided" (316a23–4). Assuming that "of this sort" (τοιοῦτον) means *divisible at the same time*, this is a reasonable stipulation, granted that the complete division is possible.

Having set the stage, it remains to consider what might be left over once the division is completed: the candidates are divisible magnitudes, points, or nothing at all. The first is summarily dismissed:

> What then will be left? Surely it cannot be a magnitude.[6] For something will not have undergone division, but [the magnitude] was divisible (ἦν...διαιρετόν) everywhere.
>
> (316a24–5)

Here "was" (ἦν) has the force of "is *ex hypothesi.*" It has been stipulated that the magnitude has been divided everywhere, but so long as it is divided into smaller magnitudes, these are necessarily divisible into even smaller magnitudes. This leaves two options: either points or nothing. The latter is again quickly ruled out:

> But, then, if [what is left will be] no body or magnitude, although there will be a division, then either [the thing originally divided] will be made out of points, and the things of which it is composed will be non-magnitudes,

> or else [they will be] nothing at all, so that it would both come to be and be composed of nothing, and the entire thing will surely be nothing but appearance.
>
> (316a25–9)

This inference relies on a tacit premise affirmed by the atomists: "the primary things of which bodies are composed" are "the ultimate things into which they are dissolved" (325b18–19). For the atomists these first or ultimate things are of course the atoms. The proposal that bits of nothing could play the same role as atoms leads to obvious absurdity. This leaves only points in play:

> Likewise, also, if it is made out of points, it will be without quantity. For when [the points] were in contact and there was one magnitude and they were together (ἅμα),[7] they did not make the entire thing larger; for when [the entire thing] was effectively divided into two or more [parts], it was no smaller (nor any larger) than before. Hence, even if all [the points] are effectively put together, they will not produce a magnitude.
>
> (316a29–34)

The reasoning here may be explained with an example: a line two meters in length which is divided at the midpoint into two segments each of which is a meter long. Now the total length of the two line segments after separation will be exactly the same as the length of the original line before separation. This is so because after the segments are separated their boundaries are distinct but when they are connected the ending point of the first segment is identical with the starting-point of the second (cf. *Metaph.* B.5.1002a34–b2). Even though there are two points after the separation where there was one before, this adds nothing to the total length. But if a single point contributes nothing whatsoever to the quantity of a magnitude, neither will a multitude of such points. Hence, a magnitude cannot be composed of mere points.

Since all three alternatives have been eliminated, it would seem that the idea that a magnitude can be divided everywhere at the same time is mistaken and that the atomists have all they need to assert the existence of indivisible magnitudes, which Aristotle states:

> Hence, since it is impossible for magnitudes to be composed of points and contacts,[8] there are necessarily indivisible bodies and magnitudes.
>
> (*Gen. corr.* 316b14–15)

By way of review the proof may be laid out step-by-step as follows:

The Atomists' Original Proof

1. Hypothesis: it is possible for M (i.e., any given magnitude) to be divided everywhere (316a17).

2. Therefore, it is also possible for M to have been divided at the same time everywhere, even if it has not undergone division at the same time (17–22).
3. Therefore, let M be effectively divided [everywhere] (24).
4. What is left after the division must be either [a] (divisible) magnitudes, [b] points, or [c] nothing (cf. 24f).
5. [a] contradicts [3] (24f).
6. If [c], M will be a mere appearance (27–29).
7. If [b], M will also be composed of points and hence be without quantity (29–34).
8. [Therefore [1] is false.]
9. Therefore, M must be composed of indivisible magnitudes (b14–16).

On this reconstruction the proof is essentially complete by 316a34 but Aristotle does not draw his explicit conclusion until 15 lines later. The intervening passage (316a34–b14) contains a series of additional objections against the hypothesis that a body of any size is divisible everywhere (cf. 316b8–9). The passage is somewhat episodic with four sections. First, Aristotle mentions a proposal that the divisions of the body are like tiny bits sawed off (οἷον ἔκπρισμα) from it. The problem with this suggestion is that such a fragment is itself "somehow divisible" (πως[9] διαιρετόν), so the same argument applies as in step [5] above (316a34–b4). Second, there is the suggestion that what it is divided into is not a body but a certain separable form or affection (μὴ σῶμα ἀλλ' εἶδός τι χωριστὸν ἢ πάθος). For instance, it might be a particular quality (or what is nowadays called a *trope*) such as whiteness, which is allegedly capable of existing separately from the body.[10] But in that case it is without size, like a mere point (στιγμή) or contact (ἁφή), so that this suggestion is vulnerable to the objection in step [7] above: a magnitude will be composed of non-magnitudes (316b2–5). Third, the proposal that the division results in points implies that points "will be somewhere" (που[11] ἔσονται) and that they are either motionless or in movement. But a point cannot exist in isolation because it is always a point of contact between two existing objects (316b6–9).

In the fourth and final section, it is observed that if wood is cut up into pieces and then reassembled there will still be an equal amount of wood. "Therefore, it is clear that this is so even if I cut the wood at any spot whatsoever (καθ' ὁτιοῦν σημεῖον). So it has undergone division everywhere in potentiality (πάντῃ...δυνάμει)" (316b10–12).[12] This inference leads to the same sorts of worry mentioned above: what will remain apart from the division? If what remains is a certain affection (τι πάθος), how could the wood be divided or recombined into mere affections or forms? How could they be separated (χωρίζεται) from the wood (316b9–14)? Some commentators view this final section either an intrusive marginal comment or as misplaced and properly belonging elsewhere in the chapter.[13] It is noteworthy, however, that it introduces two additional assumptions which the atomists must accept if their argument is to succeed: that if a magnitude can be divided *everywhere* (πάντῃ) it is divided *at any spot* (καθ' ὁτιοῦν σημεῖον), and that before any actual cut the line has been divided *in*

potentiality (δυνάμει). The importance of these ideas will become evident in the immediate sequel.

After concluding his first statement of the puzzle, Aristotle says, "But we must try to solve these things, so we must state the puzzle again from the beginning" (316b18–19). He begins as follows:

> The claim that every perceptible body is divided (διαιρετόν) at any spot whatsoever and undivided (ἀδιαίρετον) is not absurd; for the former [i.e., being divided] will belong to it in potentiality (δυνάμει) and the latter [i.e., being undivided] in actuality (ἐντελεχείᾳ).
>
> (316b19–21)

It is here, as remarked earlier, that Aristotle distinguishes actual and potential senses of διαιρετόν and ἀδιαίρετον. Hence the terms are translated neutrally "divided" and "undivided" in this passage, although the potential sense of διαιρετόν is operative in the argument as a whole. Aristotle next states the conclusion of the puzzle:

> But it would seem to be impossible for it to be at the same time divided everywhere in potentiality (ἅμα πάντῃ διαιρετὸν δυνάμει). For if it is possible, it could come about (not so as to be both in actuality (ἐντελεχείᾳ), undivided and having undergone division, but [so as to] have undergone division at any spot whatsoever [καθ' ὁτιοῦν σημεῖον]).
>
> (316b21–5)[14]

The restatement of the puzzle involves the two new tacit premises that were adumbrated earlier (316b10–12). One is that being divided at the same time everywhere (ἅμα πάντῃ) is equivalent to being divided at any spot whatsoever (καθ' ὁτιοῦν σημεῖον). The other is that if a magnitude is divided anywhere in potentiality (δυνάμει) then it is possible for it to be divided there in actuality (ἐντελεχείᾳ). Aristotle implies that these additions make the atomists' argument more compelling. He does not explain how the term σημεῖον (translated "spot") is related to στιγμή (translated "point"). Elsewhere he uses the terms interchangeably.[15] Accordingly, most translators render both terms as *point*. In this context, however, *spot* seems to be a broader term, because, in this context, *point* represents only one possible outcome of the division. In any case, Aristotle is assuming that the atomists rely on the equivalence of "at any spot whatsoever" and "at the same time everywhere" (ἅμα πάντῃ). By adding these two new ideas Aristotle is, in effect, treating the first version of the proof as an enthymeme which needs this supplementation in order to be convincing. However, it is this same addition which makes the proof vulnerable to his criticism.

As in the first puzzle, Aristotle now considers and rules out the different ways in which such a division could occur:

> So there will be nothing left, and the body will have perished into non-bodies, and it could come to be again either out of points or out of nothing at all.

> And how is this possible? But, then, it is evident that it is in fact divided into separable and ever smaller magnitudes[16]—that is, into magnitudes which are going away and separated [from the original body]. Nor could the process of breaking it up by dividing it part by part be without limit, nor can [a body] be effectively divided at every spot (for this is not possible), but [this process can go on only] up to [μέχρι του] some [limit].
>
> (316b25–32)

Having ruled all forms of division, Aristotle draws the conclusion sought by the atomists: "Therefore, it must contain atomic magnitudes (ἄτομα...μεγέθη) that are invisible—especially if coming-to-be and perishing are to take place by segregation and aggregation" (316b32–4).

Let us again set out the restated proof of the existence of indivisible magnitudes step-by-step:

The Atomists' Proof Restated

1. Hypothesis: M (i.e., any given magnitude) can be both divided in potentiality and undivided in actuality at any spot whatsoever (καθ' ὁτιοῦν σημεῖον) (316b19–21).
2. Therefore, it could come about so that M is divided in actuality at the same time everywhere (ἅμα πάντῃ) (21–25).
3. The division either [a] ends with points (or nothing) or [b] goes on without ceasing.
4. If [a], then M is composed of non-magnitudes, which is impossible (26–28).
5. If [b], either [i] M will be subdivided into ever smaller magnitudes *ad infinitum* or [ii] M will be divided at the same time at every spot (ἅμα κατὰ πᾶν σημεῖον).
6. Both [i] and [ii] are impossible, so [b] is false: the division must stop somewhere (μέχρι του) (28–32).
7. Therefore, [1] is false (cf. 21–23).
8. Therefore, M must be composed of indivisible magnitudes (32–33).

Having set out the atomists' argument, Aristotle contends that it contains an undetected fallacy (λανθάνει παραλογιζόμενος) and undertakes to show where it occurs (316b34–317a2). He explains as follows:

> For since a point is not contiguous with a point, there is one way in which being divisible everywhere (πάντῃ) belongs to magnitudes and another way in which it does not. It is believed [by the atomists] that, when this is posited, there is a point both anywhere (ὁπῃοῦν) and everywhere (πάντῃ), so that necessarily the magnitude is effectively divided into nothing; for [it is believed] there is a point everywhere (πάντῃ), so that [the magnitude] is composed of contacts or of points.
>
> (317a2–6)

Here Aristotle suggests that the atomists are guilty of equivocation since they confuse two senses in which a magnitude may be said to be divisible "everywhere" (πάντῃ): it may be divisible anywhere (ὁπῃοῦν) or divisible everywhere (πάντῃ) in a strict sense. Commentators have found this somewhat opaque because Aristotle does not spell out clearly the strict sense of πάντῃ.

The ancient commentator Philoponus, however, offers a valuable insight in explicating this passage, namely that the vague term *everywhere* (πάσῃ) conceals a non sequitur: from the fact that a magnitude is divisible *anywhere* it does not follow that it is divisible *everywhere at the same time*. As Philoponus explains,

> the body can admit of all the cuts, in the sense of any whatsoever among all of them (ἐν πασῶν ἡντιναοῦν), but not in the sense of all at the same time (πάσας ἅμα). It is as if one were to say that a human being is able to acquire every science, not because he can succeed at all of them at the same time (πάσας ἅμα), but instead because he can succeed at any one out of all of them (πασῶν ἡντιναοῦν) and not exclusively at this one or that.
>
> (*in Gen. et Corr.* 34.26–31)

Philoponus assumes that when Aristotle speaks of an object as having been divided everywhere (πάντῃ) he implies that it has been divided everywhere at the same time. Support for this assumption can be found in other passages in which Aristotle uses the term πάντῃ. For example, the term appears in another argument showing the absurdity of the atomists' explanation of why atoms travel through the void:

> Further, now it is believed that [a body] undergoes motion into the void because [the void] is yielding; but this characteristic is present everywhere (πάντῃ) in the void, so that they will undergo motion everywhere (πάντῃ).
>
> (Arist. *Ph.* IV.8.215a22–4)

The absurdity obviously lies in the implication that an atom must travel in every direction *at the same time*. The atomists do not explain why an atom travels in any particular direction. In another passage, Aristotle explains why the earth has a spherical shape:

> It is evident that, if [the parts] undergo motion in a similar way from every place (πανταχόθεν) on the extremities to the single center, the mass must be similar everywhere (πάντῃ). For if an equal amount is added everywhere (πάντῃ), the extremity must be equal (i.e. equidistant) from the center; and this is the shape of a sphere.
>
> (*Cael*. II.14.297a21–5)

Again, in order for the earth as a whole to have a spherical shape, every place on its surface must be equidistant from the center, and this requires that *at the same time* the same amount of material must have been added at every place.

Thus, according to Philoponus, because *divisible everywhere* is not entailed by *divisible anywhere*, step (2) of the restated proof does not follow from (1), so that the entire argument fails. Recent scholars have questioned whether this can be what Aristotle means when he alleges that the proof is fallacious.[17] However, even though Philoponus does not work out his interpretation in great detail, it provides the key to understanding how Aristotle goes about disentangling the puzzle concerning division, as will now be shown.

It will be helpful to begin by stating more precisely the distinction to which Philoponus is pointing. Consider an example closer to home: a college which has more commuting students than there are available parking spaces. In such a case the provost could truly say, "Anyone can have a parking space" even though it would be highly misleading to tell the students, "Everyone can have a parking space," since the latter implies that it is possible for everyone to have a parking space *at the same time*.[18] This distinction can be expressed in an analogous way in first-order predicate logic with modal operators. Let x range over students and t over times and Pxt mean "x has a parking space at time t."

Anyone can have a parking space: $\Diamond(\forall x)(\exists t)\ Pxt$
Everyone can have a parking space: $\Diamond(\exists t)(\forall x)\ Pxt$

In this case even if the first is true, the second is false. Now consider an analogous application involving division, where x ranges over parts of M (any given magnitude), t ranges over times, and Dxt means "M is divided at x at time t."

M can be divided anywhere: $\Diamond(\forall x)(\exists t)\ Dxt$
M can be divided everywhere: $\Diamond(\exists t)(\forall x)\ Dxt$

Again, the two claims are not equivalent. For the first can be true while the second is not. Thus:

$\Diamond(\forall x)(\exists t)\ Dxt \not\Rightarrow \Diamond(\exists t)(\forall x)\ Dxt$

Now consider the atomists' inference:

Since M cannot be divided everywhere, M cannot be divided anywhere.

This is just the contrapositive of the preceding fallacious inference. Hence,

$\neg\Diamond(\exists t)(\forall x)\ Dxt \not\Rightarrow \neg\Diamond(\forall x)(\exists t)\ Dxt$

Note the latter is logically equivalent[19] to:

$\Box(\forall t)(\exists x)\ \neg Dxt \not\Rightarrow \Box(\exists x)(\forall t)\ \neg Dxt$

Or, in ordinary language, "It must always be the case that some part of M is not divided" does *not* imply "There must be some part of M that is never divided (i.e. an atomic magnitude)."

Aristotle's critique of the atomists' proof presupposes his own understanding of a point (στιγμή). In his geometry a solid is an object with three dimensions: length, width, and depth. The outer boundary or limit of a solid is a plane which has only length and width. The limit of a plane is a line which has only length. The limit of a line is a dimensionless point. If a line is divided, for example, at the midpoint, the result is two lines, one ending and the other beginning at different

points. So now there are two points whereas before there was only one. Again, if the two lines are reconnected, then the endpoint of the one line is identical with the beginning point of the other, and this common point is called a *contact* (ἁφή) as has already been remarked. Further, Aristotle assumes certain relationships that are defined at *Physics* V.3 (cf. *Metaph.* K.12.1068b26–1069a14) as follows:

> X is in contact (ἁπτόμενον) with Y when their extremities are together (ἅμα[20]);
>
> X is the successor (ἐφεξῆς) of Y if X is after Y and there is nothing between them;
>
> X is contiguous (ἐχόμενον) with Y when X is the successor of Y (or vice versa) and X and Y are in contact with each other.
>
> (*Ph.* 226b18–217a17)

Aristotle maintains that these relationships only obtain between magnitudes for reasons which will soon be evident. The following exposition will focus on the example of a line, although Aristotle's argument could be extrapolated for other magnitudes.

Now Aristotle holds that a line can be divided anywhere whatsoever, so that there is an infinite number of points of possible division along the line. Therefore, he agrees that it is true in a sense that the line is divisible "everywhere" (πάντῃ). It is true in the sense that "there is one [point of division] anywhere (ὁπῃοῦν) and every [point is present] as an individual." But it is false in another sense to say this because "there are not more than one [sc. contiguous with each other[21]], since [points] are not successive" (*Gen. corr.* 317a7–9). For the claim that the line *is* divisible everywhere assumes that "if [the magnitude] is divisible at the midpoint it will also be divisible at a contiguous point" (317a10–11). But, Aristotle objects, this is false: "for a spot is not contiguous with a spot nor a point with a point, that is, [the point of] division or composition" (317a11–12).[22] Thus, because only magnitudes can be contiguous and spots are not magnitudes, it is not true that the line can be divided everywhere in the sense of being divided at every possible point at the same time.

It should be emphasized that Aristotle's argument does not depend on the assumption that the divider or the process of division is subject to physical limitations. His argument would apply even to an omnipotent divider. For consider again the hypothesis that the process of dividing a line at every possible point has been completed at some time T_1. The line will therefore have been divided at some point P_0 (for instance, the midpoint). Now consider P_1, the closest point to P_0 where the line has also been divided. Because P_0 and P_1 are not identical, they are two distinct points. However, between any two points on a line there is always room for another division, say at point P_2, where the line can again be divided at time T_2. But because, again, no two points are contiguous, there must be another point P_3 between P_0 and P_2 where the line can be again divided at T_3. Since the argument can be repeated again, and indeed many times indefinitely, there can be no time at which the line has been divided everywhere in the sense of being

divided at every possible point at the same time. This supports Aristotle's own conclusion:

> Hence there are aggregation and segregation, but not into atoms or out of atoms (for this involves many impossibilities) nor in such a way that division can come about everywhere (for if a point was contiguous with a point, this would be the case), but into small and [ever] smaller [parts], and aggregation is out of smaller [parts].
>
> (317a12–17)

Aristotle has thus exposed the fallacy in the atomists' proof. The puzzle about division can be solved without positing indivisible magnitudes.

It might be objected that Aristotle's refutation (as interpreted here), by relying on the distinction between *anywhere* and *everywhere at the same time*, violates the principle of plenitude, to which Aristotle is committed elsewhere, according to some commentators.[23] This principle may be expressed as "every possibility is eventually actualized," which might seem to imply that, if a line is divisible at any point, it will eventually be divided at every point. Jaakko Hintikka, who attributes the principle of plenitude to Aristotle, understands it to be that "no unqualified possibility remains unactualized through an infinity of time," which entails that "if something can possibly exist, it sometimes will exist in fact" (1973, 95–96).[24] The most explicit evidence that Aristotle accepts the principle comes from a passage at *Metaphysics* Θ.4: "it is evident that it cannot be true to say that 'this is possible, but will not be'" (Arist. *Metaph.* 1047b3–5).[25]

Now, even if Aristotle is committed to the principle of plenitude so understood, this poses no problem for the interpretation offered here. For, even granted this principle, the statement that it is possible for a magnitude to be divided at any point entails only that it will be divided at that point at some time. It does not entail that it will be divided at every point at the same time. Thus the principle of plenitude is consistent with Aristotle's objection that it does not follow from the fact that a magnitude is divisible anywhere that it can be divided everywhere at the same time.

In conclusion, then, Aristotle's critique of the proof of the existence of indivisible magnitudes is clear and straightforward if one attends to the text and observes Aristotle's own distinctions. It is also cogent assuming Aristotle's own understanding of points and magnitudes. Philoponus pointed out the key distinction on which Aristotle's charge of fallacy rests: namely, the atomists conflate the notions of being divisible everywhere at the same time and being divisible anywhere in the magnitude. It was shown that there is a logical basis for this distinction. Finally, Aristotle persuasively diagnosed the atomists' fundamental error, which involves a failure to understand the nature of points and magnitudes. Once their mistake is exposed, the foundation for their proof collapses.[26]

Notes

1 The key insight may be due in fact to Philoponus' teacher, Ammonius Hermeiou, because the title of Philoponus' commentary indicates that it was based on Ammonius' lectures.

2 The author is responsible for the translation, based on the edition of Rashed (2005), which departs from that of Joachim (1922) in places as explained in the following notes.

3 There is a similar claim about ἀδιαιρετόν in *De Anima* III.6: "the ἀδιαιρετόν exists in two ways: in potentiality or in actuality" (Arist. *De an.* 430b6); that is, it can mean *undivided* or *indivisible*. The concept of indivisibility thus has modal import. Hence, translations such as "the body is divisible in potentiality" (Joachim 1922, at 316b22) obscure Aristotle's meaning. Admittedly, Aristotle could have signposted this distinction more perspicuously, but it seems an overstatement to describe Aristotle as "not fully conscious" of the ambiguity (as in Williams 1982, 67). Nor is it necessary to understand "and this is possible" as marking a distinction between two kinds of *divisibility*, e.g., spatial versus conceptual (*pace* Rashed 2005, 8 n. 3).

4 Reading πάντῃ with Rashed (2005) with F (omitted in Joachim 1922).

5 This clause as found in most manuscripts is difficult because the participle διῃρημένα is plural but the logical subject is singular (i.e., σῶμα or μέγεθος). Joachim's solution to emend ᾗ to <διαιρεθ>ῇ, has been generally rejected. Verdenius and Waszink contend it is unnecessary (1966, 10f.), if it is supposed that διῃρημένα was attracted to μυρία (followed by Williams 1982 and Sedley 2004, but rejected by Migliori 1976). Rashed (following Schramm 1962) omits εἰς with F^1 and takes the subject to be an understood neuter plural (2005). The above translation follows Rashed. The alternative translation by Joachim is "even if it is effectively divided into ten thousand [things] ten thousand times."

6 Joachim's text has two question marks (1922), which seems redundant. Rashed (2005, followed here) omits the second, while Sedley deletes the first (2004). Either course seems an improvement.

7 ἅμα here has a spatial rather than temporal sense.

8 A point is called a *contact* (ἁφή) because it is where two magnitudes are joined (cf. 316b5–9). This is evident from the previous example of two line segments connected at the midpoint.

9 Reading πως with Furley (1967) and Rashed (2005) instead of πῶς with Joachim (1922).

10 Aristotle would, of course, deny that such an affection or form could exist separately, since he maintains that only substance can exist separately and that non-substances depend for their existence on non-substance (see e.g., *Cat.* V.2b3–6 and *Metaph*. Z.1.1028a31–b2). He argues here that, even if an affection were separable, the proposal under consideration has unacceptable consequences.

11 Reading που with Rashed (2005) instead of ποῦ with Joachim (1922). Cf. Arist. *Phys.* IV.1.209a11; V.212b24 on the impossibility of a point having a place and *Phys.* VI.4.234b10–20 which argues that whatever undergoes change must be divisible.

12 That is, it is possible for it to have been divided at the same time even if it has not been actually divided. Understanding the phrase in this way it is not necessary to understand Aristotle as anticipating the modern "distinction between physical and conceptual division" (Sedley 2004, 76).

13 Prantl takes the former opinion (1857), followed by Williams (1982). Sedley (2004) takes the latter view and regards it as belonging at 316b27. Joachim (1922), Migliori (1976), and Rashed (2005), however, accept it as genuine. The reference to *the wood* (τὸ ξύλον) seems to follow up on the ἔκπρισμα example, which would suggest the passage belongs where it is.

14 The parenthetical clause is controversial. Joachim (1922 (seconded by Verdenius and Waszink 1966 and by Williams 1982) regards this as not part of the argument but originally a marginal comment that made it into the main text. Verdenius and Waszink support this: "a zealous but not very intelligent Aristotelean heard the voice of the Master in the word γένοιτο and felt called upon to fix its true meaning. If a complete division is said to be 'possible', this should not be supposed to mean (οὐχ ὥστε) that a

body might in actuality be divided in all directions in the same sense in which it is now in actuality undivided, but complete divisibility can only be conceived in this sense that a body may be divided at any point (καθ' ὁτιοῦν σημεῖον)" (1966, 15). However, Migliori (1976) plausibly rejects this interpretation: the disputed passage is found in all the manuscripts and it is intended to represent the view of the *atomists* not Aristotle.

15 See Bonitz (1870, 677b35–40). The most common meaning of σημεῖον in Aristotle is *sign* or *indication*.

16 Here *magnitude* (μέγεθος) is used in the sense of *body* (insofar as it possesses magnitude in the strict sense.

17 Some recent commentators register dissatisfaction. For instance, Williams remarks that "the word ἅμα plays a very modest role in Aristotle's treatment" (1982, 75) and that Aristotle is only "dimly aware of the distinction between 'every' and 'any' and of its relevance to the ambiguity of 'everywhere divisible'" (78). On the contrary, as Philoponus discerns, the argument as restated by Aristotle clearly assumes an equivalence between ἅμα πάντῃ and καθ' ὁτιοῦν σημεῖον. Again, Sedley also remarks that "one may suspect that an emergent distinction between the two terms [namely *divisible everywhere* and *divisible anywhere*] is doing some of the work, but if so there is little sign that Aristotle sees that it is" (2004, 78 n. 28; my interpolation). It should be noted, however, that Sedley inconsistently translates the relevant terms: e.g., he renders καθ' ὁτιοῦν σημεῖον both as "at every point" (*Gen. corr.* 316b20) and as "at any point whatsoever" (316b25) and he also translates κατὰ πᾶν σημεῖον as "at every point" (316b31)— disregarding Aristotle's careful use of these expressions.

18 See Williams (1982, 73–79) for a somewhat different example and a very different reconstruction in terms of Polish logical notation. Williams, however, concludes that he finds no support for Philoponus' interpretation.

19 Although the foregoing is intended merely as an instructive analogy, Aristotle recognizes comparable logical inferences. On the negation of universal and particular quantifiers see *Int.* 7.17b17–26. On the equivalence of *not possible* and *necessarily not* see *Int.* 13.22a23–7.

20 ἅμα here too has a spatial sense.

21 This way of taking the passage shows how it leads to what follows. Alternatively, Joachim (1922) understands ὁπηοῦν from the previous line, and Sedley (2004) understands ἐφεξῆς (from the previous line, lost due to haplography).

22 The passage is difficult because the statement that a magnitude cannot be divided *everywhere* is followed by two γάρ clauses (*Gen. corr.* 317a10–12). These clauses are confusing because they are not parallel. The first is parenthetical (as noted by Rashed 2005; cf. Denniston and Dover 1950, 65 on the parenthetical use of γάρ): it gives the premise supporting the claim that the magnitude *can* be divided everywhere, i.e., "for [it is assumed that] if the magnitude is divisible at the midpoint, it will also be divisible at the point contiguous with it." The second γάρ gives *Aristotle's* reason why there is not a point of division everywhere. This construal obviates the need for T. W. Allen's conjecture (adopted by Joachim) of <οὐκ ἔστι δέ> at a11.

23 This difficulty was pointed out by Elizabeth Asmis when an earlier version of this paper was presented at a session of the Society for Ancient Greek Philosophy.

24 Hintikka himself remarks that there is no consensus among scholars as to whether Aristotle endorses the principle of plenitude.

25 Hintikka (1973, 104) also cites *Cael.* I.12.281a28–282a5, *Gen. corr.* II.11.388a1–3, and *Metaph.* N.2.1088b23–5, which are less explicit but still relevant.

26 It is a pleasure and privilege to contribute this essay to the volume in honor of Anthony Preus, who, in addition to his many eminent scholarly productions, has provided devoted and invaluable service to our profession for many years as Secretary of the Society for Ancient Greek Philosophy. This paper originated with the Ohio Greek Philosophy Group whose members provided helpful feedback when the paper was in

embryonic form. Errol Katayama and David Keyt also provided valuable suggestions on the penultimate draft. The paper was presented at a meeting of SAGP in February 2020 where it received criticisms that helped me to put it in its final form.

Bibliography

Bonitz, Hermann. 1870. *Index Aristotelicus*, vol. 5 of *Aristotelis Opera*. Berlin: Georg Reimer. Reprint, Berlin: De Gruyter, 1961.

Denniston, J. D. and J. J. Dover. 1950. *The Greek Particles*. 2nd rev. ed. Oxford: Oxford University Press. Reprint, Indianapolis: Hackett Publishing, 1996.

Furley, D. J. 1967. *Two Studies in the Greek Atomists*. Princeton: Princeton University Press.

Hintikka, Jaakko. 1973. "Aristotle on the Realization of Possibilities in Time." In *Time and Necessity: Studies in Aristotle's Theory of Modality*, 93–113 Oxford: Clarendon Press.

Joachim. H. H., ed. 1922. *Aristotle: On Coming-to-Be and Passing-Away (De Generatione et Corruptione)*. Oxford: Clarendon Press. Reprint, Hildesheim: Olms, 1970.

Migliori, Maurizio, ed. and trans. 1976. *Aristotele: La generazione et de la corruzione*. Naples: Luigi Loffredo.

Prantl, Carl, ed. and trans. 1857. *Aristoteles: Vier Bücher über das Himmelsgebaüde und zwei Bücher über Entstehen und Vergehen*. Leipzig: W. Engelmann.

Rashed, Marwan, ed. and trans. 2005. *Aristote: De la génération et de la corruption*. Paris: Les Belles Lettres.

Schramm, Matthias. 1962. *Die Bedeutung der Bewegungslehre des Aristoteles für seine beiden Lösungen der zenonischen Paradoxie*. Frankfurt am Main: Vittorio Klostermann.

Sedley, David. 2004. "On *Generation and Corruption* I.2." In *Aristotle's On Generation and Corruption I*, edited by Frans de Haas and Jaap Mansfeld, 65–89. Oxford: Oxford University Press.

Verdenius, W. J. and J. H. Waszink. 1966. *Aristotle On Coming-to-Be: Some Comments*. Leiden: Brill.

Vitellia, H., ed. 1897. *Joannes Philoponus In Aristotelis libros De generatione et corruptione commentaria*. Vol. XIV part 2 of *Commentaria in Aristotelem Graeca*. Berlin: Georg Reimer.

Williams, C. J. F., ed. 1982. *Aristotle's De Generatione et Corruptione*. Oxford: Clarendon Press.

———, ed. and trans. 1999. *Philoponus: On Aristotle's On Coming-to-Be and Perishing*, vol. 1: I.1-5. London: Duckworth.

12 Aristotle's Women

Thomas M. Olshewsky

In his explorations of Aristotle's metaphysical framework for his biological accounts of reproduction, Anthony Preus (1975) exposed how hylomorphism both enhanced and limited the biological inquiry. While focusing on generation, he explicitly does not discuss the aspect of the differentiation of male and female in the first book of *Generation of Animals*. I want to take up that aspect with attention to tensions between the science and the metaphysics.

We may quip that women are from Venus and men are from Mars, so how can they be of one species? Aristotle actually addressed this question seriously. He took the question up in the context of his more general consideration of the nature of contrariety in *Metaphysics* Iota: "One might raise the question, why woman does not differ from man in species: female and male being contrary, and their difference being a contrariety?" (Arist. *Metaph.* 1058a30). This question may well have been motivated by the need to justify the biological differentiations that he found necessary in countering the pan-*sperma* conceptions of Hippocrates. Maintaining that male and female must make different contributions to reproduction, he must then account for why the differences do not imply a difference in species. I want here to explore this question in the light of Aristotle's account in *Generation of Animals*.

In *On Parts of Animals*, Aristotle had treated both male and female contributions as residues of the sexual engagement without any employment of hylomorphic categories. There they are treated as homogeneous fluids whose analysis is postponed until his treatise on generation. The male's contribution is characterized merely as an ἀρχή (source) of the thing generated, and the female's merely as γάλακτος (milk), providing only the nourishment for the growth (*Part. an.* 655b24–28). Here, he has already an account analogous to his notion of plants having basically a nutritive function. The conception of σπέρμα here is that which supplies the nature of the animal, that of the γάλακτος supplying the nutrients. The differences in their heat are taken into account only as an indication of the superior strength of the male. Here there is no indication that the female also provides σπέρμα.

It is in Aristotle's arguments in *Generation of Animals* against Hippocrates' *pangenesis* thesis that *sperma* come from the whole body where we find his own exposition of a two-*sperma* thesis. This has, ironically, led some to claim that

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he maintained there that the sperm comes only from the male. Scholars such as Robert Mayhew (2004) and Sophia Connell (2016) each have made clear that both male and female contribute *sperma*, though in different roles and to different degrees. Aristotle's contention against the pangenesis thesis is that the organizing of fetal development requires one parent as its source, but that the source of *sperma* must be from both:

> As we said above, the male and the female principles may be put down first and foremost as origins of generation, the former as containing the efficient cause of generation, the latter the material of it. The most convincing proof of this is drawn from considering how and whence comes the semen: ...For it is just because the σπέρμα is secreted from the two sexes, the secretion taking place *in* them and *from* them, that they are the first principles of generation.
>
> (Arist. *Gen. an.* 716a5–12;s)[1]

Here, as Preus notes, Aristotle is in trouble with casting the male's *sperma* as the source and form of the offspring, with the female's as matter passively taking on the form. The female does not contribute to the generating γονήν (that which is begotten, often translated *semen*), but to the matter for the γονήν to inform. But, since the matter itself cannot be without form, this presents a problem. To maintain that the notion of formal source blocks Hippocrates' thesis, Aristotle must differentiate male and female contributions to genesis as specifically different. He indeed says as much: "For there must needs be that which generates and that from which it generates; even if these be one, still they must be distinct in form and their essence must be different" (729a25). Such difference must surely imply difference in species.

Preus suggested that readers of *De Anima* III.9–11 might be surprised to find πνεῦμα introduced as a motive force in *Generation of Animals* II.2. Still, some may already find at the end of *De Anima* III.10 the promise of it. Aristotle's account of the fulfillment of an ὄρεξις (appetite) in action gave promise of a fuller account of the instrument producing the motion, but with no mention there of πνεῦμα. The analysis in *Generation of Animals* II.2 of the σπέρμα as πνεῦμα and water finds its impetus in the developments that Aristotle had made in the nature of πνεῦμα. Until his treatise *On the Motion of Animals* we can find nowhere the notion that πνεῦμα is an internal force in the makeup of an organism. Elsewhere it is treated only as wind. In *De Anima* III.10 he took the initiation of an action as analogous to the point in the joint where mover and moved meet, but there he made no allusion to πνεῦμα. In biological treatises other than *Generation of Animals* πνεῦμα has the role of a force external to the σπέρμα. In the *History of Animals* account there is a preliminary discharge of πνεῦμα that gives impetus to the σπέρμα from the male (*Hist. an.* 586a16), and "when the emission takes place here [before the womb], the womb, like a nose, draws it in with the πνεῦμα" (634b35). This treats πνεῦμα as clearly distinct from σπέρμα, but assisting its passage like the wind blowing it forward.

It is in *On the Motion of Animals* that we first see πνεῦμα belonging internally to the organic constitution. There it is seen as that which initiates movement and possesses a kind of force and power. It is what provides the connection between the determination of action and its enactment:

> Now that which is moved, but whose nature is not to initiate movement, is capable of being passive to an external force, while it is necessary for that which initiates movement to possess a kind of force and power. It appears that all animals both possess congenital πνεῦμα and the power from this.
> (*De motu an.* 703a8–10)

For Aristotle's accounts of animate motion, this seems a virtual *deus ex machina*, and lays a basis for its role in the generation of animals. The heart generates the πνεῦμα, and the πνεῦμα gives the impetus to motion. While Connell argues that this is not a "fifth element" (2016, 220), Aristotle accords it with the status "more divine than the so-called elements." It is the "vital heat" that is not fire, "but it is the πνεῦμα included in the σπέρμα and the foam-like, and the natural principle in the πνεῦμα, being analogous to the element of the stars" (*De motu an.* 736b35–7). It is the force constituted of heat and air that carries the nascent soul in the male σπέρμα to the material for the soul's nurturing.

The matter with matter is that it is a relative term. There is no matter *per se* (prime matter being an abstraction beyond the realm of any actuality). Matter is always relative to an actuality, for its constitution and its becoming. Aristotle delineates in *De Anima* II.1 a correlation of the actuality of an animate being to its form and soul and the potentiality of it to its matter and body. Of any given entity, its matter is that out of which its actuality is constituted. Of any actualization, its matter is the out of which it is to become. The woman's καταμήνια (literally, monthly payment), characterized as the matter relative to the form of the man's σπέρμα, is not an inert stuff similar to Plato's receptacle. It has actual character of its own, with the primacy of generative functions. As in all instances of matter, the female καταμήνια has δύναμις (potentiality, power) for the ἐντελέχεια, the constitution it is to become. Thus, it has the form potentially. As Jean De Groot points out, "The female must possess the form potentially in order for her offspring to be the same species as herself and the father" (2014, 145). The matter contributed by the female can be neither inert nor passive.

De Groot accents another point about the potentiality found in the menses. He draws a distinction between σπέρματα "imparting form" and "bringing about movement." While the role of the male σπέρμα is to cause the continuing development of the embryo, "Aristotle understands the male seed to do the latter in the process of development." Noting the analogy to the automaton in *Generation of Animals* 2.5, De Groot points out that in the chain of immediate causes, "the movements of the developing embryo are themselves productive of other movements" (2014, 142). As Connell explains it, on a wind-up model of the automaton, one part moves another's actualization (2016, 225). Even as the original cause of the coming to be is the male σπέρμα, the immediate motive is

the antecedent development at each stage of further development. So, the σπέρμα brings into actualization the heart, which in turn brings in the liver, and so on. The σπέρμα has a trigger effect on every development, but it is the potentialities in the menses that are actualized in the development of the embryo.

William Wians gives similar accent in fathoming the relation of hylomorphic explanation to issues of family resemblance. He maintains that the contrasts drawn between male as active and moving and the female as passive and moved in Book I of *Generation of Animals*, are both preliminary and incomplete (2017, 238). In Book II, Aristotle refines these with the introduction of πνεῦμα and discussion of the faculties of the soul in terms of potential and actual. In Book IV, he draws a distinction between δύναμις and ἀδυναμία to highlight that the female's incapacity is specifically in terms of her inability to concoct blood to the purest state, thus falling short of the male's active σπέρμα. Once the nutritive δύναμις in the female is activated, it becomes the cause of subsequent developments in the organism, having incorporated the initial formal cause from the male. The chemistry of proportions of relative heat between the male and female πνεῦμα is the cause of sexual determination and family resemblances. Aristotle combines the principle of proportionality with the female's relative incapacity to fully concoct blood to explain the differentiation into male and female, the resemblance to father and mother, and to more distant ancestors.

So, on the face of it, *Generation of Animals* seems to offer biological perspective on the specific human unity of man and woman. Yet, he has said in *Generation of Animals* I.2: "Male and female differ in their definition by each having a separate faculty" (Arist. *Gen. an.* 716a19). More telling, he said, "There must needs be that which generates and that from which it generates; even if these be one, still they must be distinct in form and their essence must be different" (729a25). The female contribution, if it is to become the material for the becoming of a new being, must itself be in some form to receive the form provided by the male σπέρμα. If we then take this to indicate a specific difference, then we must be perplexed by how a male and female can generate an offspring that will be one or the other species. Robert Mayhew dismisses the issue by noting the passage in *Generation of Animals* I.2 that maintains the animal is not male or female as a whole, "but only as a certain faculty and a certain part," and by taking *Metaphysics* Iota.9 to have settled the question (2004, 70). But, surely different faculties indicate different specific constitutions. Given an understanding of a specific kind as determining the whole structure and function of an organism, it may be worth another look at Aristotle's argument.

In *Metaphysics* Iota, Aristotle raises the question of the contrariety of women and men against the backdrop of a broader question: "Why does one contrariety makes things different in species and another does not; for instance, *with feet* and *with wings* do, but whiteness and blackness do not?" (*Metaph.* 1058a35). He finds his answer in the discrimination of difference in formula as opposed to difference in matter. Here, the backdrop is the conception of what differentiates one individual of a species from another, namely the material of their individual constitution. Callias is a white man, but does not differ from a black man in species

because they are of the same form. So, qualities such as black and white ordinarily do not influence difference in form; differentia like *with feet* and *with wings* do. He claims "Yet, white is contrary to black" (1058b31).

But here, Aristotle is introducing a new contrast. The contrast Aristotle made for contraries in *Categories* X was not between difference-in-form and difference-in-matter but between those that are either/or (necessarily one or the other) and those that admit of degrees of intermediaries. Well-or-ill is of the former sort; black-or-white is of the latter. If he were to use that matrix, male and female must clearly be of the first sort. A person is either a male or a female. But this in no way gives determination of whether they are different in form or different in matter: "Contraries which are in the formula make a difference in species, but those which are in the compound material thing [that is, the individual] do not make one" (*Metaph.* 1058b2). The difference between a black man and a white man is not a specific difference, since an individual man can be both, though not at the same time (1058b33). But, clearly the contrariety between man and horse does not depend upon their color, but because they are different in form. Aristotle then follows with: "And man and woman are indeed modifications peculiar to animal" (1058b22–23). It is not yet clear, however, how this makes it different from the example of man and horse. He maintains that, for man and woman, the difference is not "in virtue of its substance, but in the matter, that is, the body" (1058b22). But, if *with feet* and *with wings* make for a difference in species, surely *with uterus* and *with penis* has a parity of distinction.

Perhaps we can take a different tack on his phrase "modifications peculiar to animal," now taking it to apply to all organic beings, plants included. The relevant peculiarity for ἔμψυχος (animate beings) in procreation is in the nature of the substantial change between parent and offspring, resulting in a being clearly like one of the parents. For ἄψυχος (inanimate beings), substantial change is the consequence of the cause for change resulting in a different kind of thing, with the material that undergoes the actualization becoming a specifically different kind of being. This is most easily seen in the generation of one element from another and in the creation of artifacts by humans, but other examples may be readily called up from nature (ash from fire and wood, for example, though Aristotle might analyze such as changes among elements). The peculiarity of biological reproduction is that the products are specific duplicates of the originals. If the offspring must be of the same species of either male or female, then presumably it must be of the same species as both.

But, does this not take us back to the problem at hand? Is not the presumption of common species countered by the nature of the biological contributions of the mates? We began with πνεῦμα contributed by both parties, where the heat generated from the male exceeds that of the female, but it is the proportion of difference that determines the sex of the offspring. The male σπέρμα is cast as providing the form (the ψυχή) and the female the matter (the ὕλη). But if the contributions are somehow different in specific kind, as Aristotle requires for his argument against pangenesis (that semen comes from the whole body), then this too weighs in on the side of the male and female being constitutionally different.

It may be too fanciful a reconstruction to suppose that Aristotle himself realized the problem in unfolding his account in *Generation of Animals*. He initially attempted, in the first book of *Generation of Animals*, to counter the pangenesists' treatments of reproduction by introducing hylomorphic conceptions to assert the need for differentiation of source and form. Finding it difficult to specify how the male contributes the source, he introduced an analysis of σπέρμα to constitutionally include πνεῦμα to account for source, but was still left with questions about hylomorphic relations between male and female. He then meant the treatment of Male-Female contrariety in *Metaphysics* Iota.9 as a way to put the problem to rest. If so, I find it unconvincing. His hylomorphic gloss on the different contributions of σπέρμα from male and female does not blend well with the notion of relative proportion determining sex, and the activation by the male of the female's δύναμις is already an enabling force for what is actually undergoing the embryonic changes. His main thrust against the pangenesists is that they lack an account of structure, but if the account of structuring by the male relies on structural conditions already present in the female, then there is a contrast of structures that raises the question of distinct species. If the accent is on material differences, couched in terms of heat and blood, it seems open to the claims of his opponents.

The nub of the problem, of course, may lie in the lack of refinements in Aristotle's account of the structural contributions. In the light of modern genetics, we can see his structural functionalism carried forward in the pairing of chromosomes, without the presumption for male dominance. Of course, this leaves the male a half-chromosome short of equal determination, and up-ends Aristotle's presumptions of male genital advancement (general supposition now is that the female's internalization of genital parts is evolutionarily more advanced).

None of this should return us to laying the sexist presumptions of our own culture at Aristotle's door. The treatment of σπέρμα as *seed* invites an analogy to plant reproduction, and Aristotle's account in terms of πνεῦμα and water seems a bit more fluid. It is in the Judeo-Christian traditions of the husband/wife as *ba'al* and *nashim* that we get the more explicit analogy to seed and field. The husband plants a seed in the wife's field, where it is nourished but not formed, the field being an inert receptacle. The husband then acts as the caretaker—as a husband of a field. This has much more basis for the sexist attitudes of our current culture. But, that's another story for another day.

Note

1 All translations are from Barnes (1984), unless noted otherwise. The passages are modified occasionally to expose key terms in the original Greek.

Bibliography

Barnes, Jonathan. 1984. *The Complete Works of Aristotle*. Princeton: Princeton University Press.

Connell, Sophia M. 2016. *Aristotle on Female Animals*. Cambridge: Cambridge University Press.

De Groot, Jean. 2014. *Aristotle's Empiricism: Experience and Mechanics in the Fourth Century BC*. Las Vegas: Parmenides Publishing.

Mayhew, Robert. 2004. *The Female in Aristotle's Biology*. Chicago: University of Chicago Press.

Preus, Anthony. 1975. *Science and Philosophy in Aristotle's Biological Works*. Hildesheim: G. Olms.

Wians, William. 2017. "Is Aristotle's Account of Sexual Differentiation Inconsistent?" In *Reading Aristotle: Argument and Exposition*, edited by William Wians and Ron Polansky, 236–56. Boston: Brill. ProQuest Ebook Central.

13 εἶδος as Species in Aristotle's *Metaphysics* Zeta*

Andrey Darovskikh

Introduction

The difficulty with interpreting Aristotle's notion of εἶδος is well documented (e.g., Balme 1962; Devereux 2011; Driscoll 1981; Irwin 1988; Loux 1979; Preus 1979; Whiting 1986; Woods 1993). The range of meanings that word has for Aristotle can be summarized in four general interpretations:

1. Etymologically εἶδος comes from the verb εἰδῶ (οἶδα) *to see*, thus first, εἶδος simply means appearance, a visible shape, or a form.
2. The historical sense of εἶδος in Aristotle refers to the Platonic εἴδη (Forms/Ideas).[1]
3. Furthermore, both metaphysics and biology reveal that Aristotle refers to εἶδος as some type of formal organization for a substantial being (οὐσία) that is opposite to the material one.
4. Finally, εἶδος means a determined form of some kind, a sub-class of γένος, or something close to what we call *species*.

Things get even more complicated because, occasionally, Aristotle speaks of γένος as a matter and εἶδος as something that perfects the γένος, or as a complete differentia of the γένος (see Grene 1974; Rorty 1974). As Lennox says: "At this point one may begin to develop sympathy with the positivist inclination to dismiss metaphysics as nonsense" (2001, 128). I follow Lennox's advice to not follow this inclination.

We start with the general background of *Metaphysics* Book Z and see that Aristotle's main interest is *being*, he is first and foremost intrigued by existing things, i.e., by *what is*; and such an inquiry is followed by the questions about *what a thing is* (τί ἐστιν, *Metaph*. 1028a10–12). We know a thing most fully when we can say what it is (1030a6–7). Does Aristotle answer similarly the questions about existence of entities, such as "what *is* a human being" and questions like "what *is it* that makes an entity definable as a human being" or "what is human in virtue of itself?" (I will also refer to it as to a question about *essence.*) My ultimate answer is that they are not

* To the scholar I admire, to the teacher I love.

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fundamentally distinct questions for him. But there is a difference, and it is a difference that comes about due to the conjunction of the question about what something is καθ' αὑτό (in virtue of itself) with the question about εἶδος.

At the same time, we can see that in *Metaphysics* Z there are two lines of the argument about εἶδος. On the one hand Aristotle ponders what something is in virtue of itself through its definition, which belongs to species (εἶδος), and on the other hand, τὸ τί ἦν εἶναι (*what it was to be*, which is often translated as essence) is defined through its *form*, as an internal structure of the object. In the latter sense, *form* inserts the logic of definition into the reality of existing things. This admittedly sparks a debate as to whether Aristotle understands *form* in the second case as a synonym for species or not: some interpretations of the meaning of εἶδος suggest that the term is applied to two ontologically distinct classes of entities (see e.g., Cohen 2016). This invokes an argument about a possibility of two separate concepts for the word εἶδος in Aristotle's philosophy: εἶδος as a species and εἶδος as the form of an individual that is predicated of the matter of which it is composed. Contrary to these interpretations, I will be arguing that, for Aristotle in *Metaphysics* Z, εἶδος as species and εἶδος as an internal structure of a particular compound are the same concept.

The arguments of this paper aiming to clarify the concept of εἶδος hinge on specific interpretations of three related issues which are also in the focus of *Metaphysics* Z.

1. Limitation of the question about τὸ τί ἦν εἶναι to the species (εἶδος) of a genus.
2. *De re* conceptualization of τὸ τί ἦν εἶναι: οὐσίαι as definable realities.
3. The relationship between each thing and its τὸ τί ἦν εἶναι (essence).

First, I will start with Aristotle's take on the question of τὸ τί ἦν εἶναι in Z.iv and show that an essence of each being is that by means of which it can be defined *per se*, and essence speaks primarily to the attribution of subjects to a species kind. Then I turn to arguments about *being* in *Metaphysics* and show that the cohesion of essence as verbal formula with an actual entity raises questions about whether an individual and the τὸ τί ἦν εἶναι of such an individual are the same thing or not. I will show that, for Aristotle, the identification of essence with each thing is conceivable only with a qualification that each thing is being considered *per se.* After that I will get to the main argument where I will examine the ambiguity of the term εἶδος in *Metaphysics* Z and its relationship with the categories οὐσία and *essence.* In the final part I will point out that a consistent reading of εἶδος as species and as an internal structure of an individual in *Metaphysics* Z raises a question about the principles of individuation of entities. With the help of several points from Aristotle's biological works I offer a solution to that problem.

τὸ τί ἦν εἶναι and εἶδος

Metaphysics Z.iv raises a problem about which ontological level the application of the phrase τὸ τί ἦν εἶναι refers to. Does it refer to the notion of species/class or can

the phrase τὸ τί ἦν εἶναι be applied to a single individual? Aristotle facilitates a claim that only the species of a genus can be properly addressed with the question about essence (1030a11–13).[2] That claim, however, contrasts with some other remarks of Z.iv, where Aristotle even attests that essence can be taken in as many senses as there are senses of being, just as accidental compounds have essence. I agree that interpretations favoring the ontological individualism of Aristotle are not wrong (see Gotthelf 2012, 32–33; Balme 1987a, 1987b; Pellegrin 1986, 70). For Aristotle, only individuals (τόδε τι) stand for the full and complete reality. However, it seems that the question about *what it was to be* that complete reality has some epistemological constraints. Ultimately, individuals cannot be exhaustively described; what something is in virtue of itself is something *definite*, while an individual is, in a way, *indefinite*, in terms of what could be said about it. On top of that, Aristotle sees some other problems with conceding essential predication to separate individuals.

Aristotle's teaching on what something is in virtue of itself in Z.iv is quite complex. The text has several layers for consideration (logical and metaphysical; Burnyeat 2001, 6–7) and abundant literature provides a variety of interpretations (e.g., Angioni 2014; Brody 1973; Burnyeat 2001; Charles 1993; Cohen 2016; Dahl 1997; Kung 1977; Peramatzis 2010; Woods 1993). In the face of that, making my way through Z.iv, I cash out the unequivocal claim: Aristotle's discussion about what something is in virtue of itself in a proper sense is implausible without a reference to species or genus.

In *Metaphysics* we read that the question about τὸ τί ἦν εἶναι for Aristotle refers to the question of what something actually *is* (ὅπερ γάρ τί ἐστι τὸ τί ἦν εἶναι, *Metaph.* 1030a1). The claim "essence is what something (this) is" needs an important clarification, namely, *this* should be taken not in the sense of what something *is* as a compound (of predicates) but what something is *in virtue of itself* (1029b14–16). What it is to be in virtue of itself appeals to what is primary and defining for an entity *vs.* what is accidental and merely offers some depiction of the entity. Further, Aristotle states that *what it is in virtue of itself* is a formula that does not name the entity but defines it (1029b19–20). Therefore, we know *what it was to be* of a subject when we can give a formula of it and that formula should be definitive. The problem with claiming what it is in virtue of itself *as* a definition is that obviously Aristotle has some criteria for a definition in mind, and not every formula of a subject will qualify for a definition.

Aristotle argues that a reference to a compound, like *a white man* is not a reference to *what it was to be* of that man (1030a3–5). By no means should Aristotle be interpreted as saying that an individual white man does not have any essence—of course he does have it *qua* human being, but it is important to see that a formula of an accidental compound such as *a white man* is not the same as his definition or essence. Obviously, for Aristotle, any subject can have a formula, either a simple one or a more accurate one, which stands for a descriptive account. It might point to a *definiendum* or even elucidate the meaning of it, but that will not necessarily be a definition. For instance, describing Socrates at some point of his life, we can give an account by means of lumping together various attributes to offer a quite detailed description of him. In logic it is called a *definite description*. This definite

description would consist either of the noun-phrase or a set of predicates which apply to a unique individual or object, for instance the *Iliad* (the example Aristotle uses) or Socrates is such and such. A proper definite description cannot be undetermined; for example, *a man in the agora* is an improper definite description because it can stand for more than one man. At the same time a description fails to meet the criteria of a definite one when it applies to a non-existing object, like a "winged quadruped." A formula can be very accurate, but it will not be equal to giving a definition and will not stand for putting a finger on what this subject is in virtue of itself. On the one hand it is because, as Aristotle claims, the number of accidental characteristics is unlimited, and therefore a definite description of an accidental compound is endless. On the other hand, any compound which can be described through a formula, or a definite description, fails to be a definition if it does not stand for a *per se* predicate:

> Nothing, then, which is not a species of a genus will have an essence—only species will have it, for these are thought to imply not merely that the subject participates in the attribute and has it as a *disposition* affection, or has it by accident; but for everything else as well, if it has a name, there will be a formula of its meaning—viz. that this attribute belongs to this subject; or instead of a simple formula we shall be able to give a more accurate one; but there will be no definition nor essence.
>
> (1030a11–17; trans. Ross with minor amendments)[3]

First, a definition stands for *what it is in virtue of itself* when predicates do not fail to be true of a subject, given that the latter is taken *per se*, otherwise an unlimited number of predicates could be right about a subject. Second, there is a definition when the formula conveys something primary about the subject, and primary things are those, Aristotle says, "which do not imply the predication of one element in them of another element" (ἄλλο καθ᾽ἄλλου, 1030a10–11; 1030a4).[4] We can see the difference between predication in which one thing is said of another and a definition as essence if we look at two examples: 1) human is white *vs* 2) human is a rational animal. The disparity comes to the status of a subject (human), which is either 1) an underlying subject or 2) a part of an interdependent pair of a logical structure. In the former case the standing of a subject (human) does not depend on the predicate (white), and subsists as an underlying thing, i.e., the subject can exist without the predicate, nor does it contribute to the meaning of the predicate. The meaning of white in order to be self-sufficient does not require a human being. Furthermore, in the case when one thing is said of another there is some fundamental difference between the two, i.e., they are ontologically distinct, and the being of one does not depend on the being of another.[5] On the face of it, the relation between a human and *zoon logikon* is quite different. When human is said to be a rational animal, it does not stand for a relationship of one thing being said of another. Aristotle defines human *as* a rational animal, thus on the one hand rejecting the possibility that any other species is rational. On the other

hand, a rational animal becomes meaningless without humans. One might relish the opportunity to speculate what Aristotle would do if he were to discover that some species of whale are rational. I guess he would be driven to define human being as rational biped, or simply insist on *zoon politikon* since clearly no other animal lives in what he would call a *polis*. The terms *human* and *rational animal* are ontologically dependent. If we speak about what it is something in virtue of itself, the relationship between *definiens* cannot be such that one of them becomes underlying and independent of another, as it happens in the case of white and human. According to Aristotle, *only* the species of a genus can fulfill this advanced criterion for an essence. Aristotle does not bother himself with giving a definition of any species, but if we try to retrieve one from his biological studies, for example, a definition of elephants as species, we will have something like: a large polydactylous animal with a nose in the form of a trunk (see *Part. an.* 658a27–659a37). This example again represents an interdependent pair of a logical structure. Elephant is the only polydactylous animal with a trunk that uses it for eating assistance, and the other way around (a polydactylous animal with a trunk) is nothing else but an elephant.

Thus, Aristotle's essentialism ought to be separated from so-called *individual essentialism.* The doctrine of individual essences defends a claim about the uniqueness of individual objects; this uniqueness is firmer than just personal identity. For it attests that all objects are so intimately associated with their possessed characteristics/properties to the extent that nothing else could have precisely those characteristics, unless it *is* that object (Parsons 1969, 35). According to this doctrine two objects sharing the same essence simply could not exist. Again, individual entities are core constituents of Aristotle's ontological structure, but τὸ τί ἦν εἶναι will be true of more than one individual—of a class/species of individuals, and a definition of this species corresponds to what it is in virtue of itself.

De re Conceptualization of τὸ τί ἦν εἶναι

It is important to focus on the point that a definition is telling us about a verbal formula of an entity, but according to Aristotle one can give a verbal formula (definition of something) only if it is known that this entity *is.* Not so much from *Metaphysics*, but more explicitly from *Posterior Analytics*, we know that Aristotle is willing to talk about accounts of something fictional such as a unicorn or a centaur (*An. post.* 92b8, 89b32, respectively). Hypothetically speaking, Aristotle could formulate an account of *centaur* as a red-blooded animal with four cloven-hoofed legs and two upper limbs.[6] However, for Aristotle an account of something without proving that this entity *is* renders the attempts to define its essence moot. Only knowing that something *is* (εἰ ἔστιν), we can ask what it is (τί ἐστι, 89b34). In *Posterior Analytics* Aristotle argues that entities that do not exist do not have essences:

> How can one prove the essence? Anyone who knows what 'man', or any other thing *is* must also know that it *is*; because no one knows what a non-existent

> thing is. (He may know the meaning of a phrase, or of a name if, e.g., I speak of a unicorn; but it is impossible to know what a unicorn is.
>
> (*An. post.* 92b5–9; trans. Tredennick 1960, 197)[7]

That question then is, what does Aristotle mean by the claim that something *is*? He holds a view that there are no uninstantiated kinds. Thus, inquiries about *what it was to be* for something are legitimate in *de re* sense rather than *de dicto.* It is pivotal that definitions identify species/classes that are represented by entities, and that it is not just the identification of words. Aristotle's syllogisms always have existential commitments to the entities (and attributes) included in the argument. For instance, the goal of seeking a definition of *dog* is not to tell the meaning of the word *dog*, nor to point to a particular dog; instead, it is supposed to tell us *what* dog *is*, and that account should correlate with the existing species of dog.

Similarly, in *Metaphysics*, for Aristotle a pursuit of the question *what something is in virtue of itself* is not a search for concepts or linguistic connections, it is a search for defining particular things grouped in species/classes. Thus, any consideration of essence is inseparable from *existing entities.* The reasons for such delimitation come from how Aristotle prioritizes what *is*, and ultimately argues that all types of being which are many are not possible without *thises*:

> … in one sense the 'being' meant is 'what a thing is' or a 'this' (τὸ μὲν *τί ἐστι* καὶ *τόδε τι*), and in another sense it means a quality or quantity or one of the other things that are predicated as these are. While 'being' has all these senses, obviously that which 'is' primarily is the 'what', which indicates the οὐσία of the thing.
>
> (*Metaph.* 1028a10–16)

A technical term for *this* is οὐσία. Since οὐσία is a derivative from a participle of the verb *to be* (εἰμί), I do not favor the translation of it as *substance* and find *substantial being* (Burnyeat 2001, 12) or *entity*[8] more accurate, furthermore in most of the cases in this text I will even leave the word οὐσία untranslated. Aristotle introduces οὐσία in the *Categories* as the primary sense of *being*, however it is in *Metaphysics* where he offers a developed analysis of οὐσία as simple *being* without qualification (1028a29–31; see also *Metaph.* 1003b6, 1028a13–20; 1028a32–b2; 1045b25–32), the analysis of what *is*. Categorizations of οὐσία in *Categories* and *Metaphysics* include some differences. Some of the most relevant ones are the following: the secondary οὐσία in *Metaphysics* is replaced with the concept of species, and in *Metaphysics* οὐσία is developed in terms of form and matter, while we do not find those terms in the *Categories.* I consider the difference in understanding of οὐσία from *Categories* to *Metaphysics* as a development of the same concept, and the introduction of εἶδος (form) and understanding of οὐσία as a substantial *form* stands for Aristotle's complete metaphysical account of οὐσία. Going deep into the question why Aristotle settled with an idea of οὐσία being a *form* would probably take me too far from the purposes of this text, but a summary of Z.iii will bring everyone to the following point. Matter is what something is

made of and Aristotle rules it out since it fails to meet the criteria of thisness and separability which are necessary for οὐσία. He analyzes οὐσία in terms of *form*, or a combination of form and matter, and eliminates the composite as a candidate for being οὐσία because it does not meet the criteria of being first in definition, in order of knowledge, and in time. It signifies the shift from the question about οὐσία as a category and concept as we know it from *the Categories* to the question of what makes it an οὐσία (*Metaph.* 1028b31–32). Through the εἶδος, οὐσία actualizes its definition; οὐσίαι become definable realities due to the εἴδη they possess.

However, the characterization of οὐσία through an εἶδος might seem unhelpful and even confusing. The thing is that any οὐσία is an identifiable entity: then in this sense there is no real difference between οὐσία and an individual thing. At the same time, identification of οὐσία with an εἶδος might yield different conclusions, given that εἶδος stands for what defines what something *is*. As some commentators argue, the choice for οὐσία as a *form* gives "endless trouble" because the *form* seems to stand for species, elsewhere for essence (Crane and Wiggins 1998, 233). In this sense οὐσία looks more like an essence than a concrete individual thing. This association of οὐσία with εἶδος causes an equivocal understanding of οὐσία, that is torn between 1) a particular thing, or 2) an εἶδος aka definition.[9] In itself, this splitting in the meaning of οὐσία is problematic for Aristotle's metaphysics since it contradicts the categorization of οὐσία as a single primary sense of being that implies something singular.

It is important to note, that the split of the meaning of οὐσία into what Ronna Burger has termed "some this" or "compound *ousia*" and "what it is" or "*ousia* in accordance with the logos" (Burger 1987 64–65) is complicated by Aristotle's arguments about the primary role of εἶδος (οὐσία as *what it is*) over some *this* for defining what an *entity* is. As I said previously, Aristotle's logic and ontology first in *Categories*, and then in *Metaphysics* exemplify the priority of individuals over species (*Metaph.* 1028a30), where the latter can be predicated of the former but not the other way around. However, in chapters vii–xii of Book Z amid the discussions about οὐσία as εἶδος we witness a subordination of οὐσία as *some this* to an immanent form/essence, which is no longer just a generalization but a genuine way of identifying what an entity *is*. Εἶδος in οὐσία is a primary way for determining what an entity is (1037a25–30). It is not the matter, nor the matter and εἶδος as a compound, that determines whether Socrates is a man, but an εἶδος, Aristotle says: "there is no formula of this with its matter, … but there is a formula of it with reference to primary οὐσία…for the οὐσία is the indwelling εἶδος, from which *together with* the matter the so-called *compound* οὐσία is derived" (1037a27–29; with slight amendments in italics). An οὐσία becomes a definable reality due to its εἶδος. This can also be supported by his earlier suggestions that εἶδος is more primary than a compound of *form* and matter, for the same reason, is more primary than just matter (1029a6–8).

Ronna Burger suggests that it is important to close this gap in the ambiguity of the meaning of οὐσία, whether it is *some this* or *what it is*. It comes, she suggests, through the clarification that essence and each thing are the same for Aristotle (1986, 73). Basically, the logic of this proposition is justified from the position

of necessity as if Aristotle ponders the identification of each thing and essence to the effect that εἶδος as essence is identified with οὐσία as individual which in turn avoids threatening the single primary meaning of οὐσία. I do not agree with this interpretation. First, I take a different stance on the relationship between essence and each thing according to Aristotle. Second, I think the problem of οὐσία does not even require such a step.

Is Each Thing the Same as its Essence?

It does not seem to be an exaggeration to say that in Book Z.vi Aristotle gives contrasting answers to the question whether each thing is the same as its essence (cf. *Metaph.* 1031b11–15 and 1931b28–1032a6 with 1037a33–b7 and 1043b2–4):[10]

a) On the one hand it seems illogical to argue for the sameness of *what it was to be* and each thing, because the former refers to the definitive properties, without which an entity ceases to be what-it-is. By contrast, each thing consists of some essential properties and others it possesses contingently. Properly speaking, τὸ τί ἦν εἶναι is not about properties of an individual, it is rather something that makes it a definable entity, and contingent properties can be added to it. From this point of view, Aristotle views identification of each thing with its essence as problematic (1031a19–21). For instance, a definition of dog as species does not include all possible variations in phenotype which can normally occur in a particular representative of dog species, and in this sense, it is hard to identify a particular dog with dog as a species.
b) On the other hand, there is no essence as a separate entity beyond particulars, essence is not separate from what it defines: a particular dog is a dog as a species. Obviously, Aristotle needs to defend this claim insofar as he wants to distance himself from understanding essence as anything akin to Platonic *Forms*, i.e., for him essence cannot obtain an ontological status if it *is not* what an individual *is*.

Methodologically, I hold to the interpretation that *Metaphysics* Z considers opposing answers for polemical reasons. My general sense of the relationship between what *is* and its *essence* is that Aristotle gives a negative response to the question whether they are the same or not if we talk about an individual as a form-matter compound with a range of accidental attributes; and essence and individual should be deemed the same if an individual entity is considered *in virtue of itself.*

Claiming that essence is not the same as each thing raises a question about the ontological status of essence. Due to Aristotle's desire to stay away from making essence look like a Platonic *Form*, he states that essence does not exist beyond individuals, it is known through individuals and in this sense, it is no different from each thing.

> If the essence of good is to be different from good-itself, and the essence of animal from animal-itself, and the essence of being from being-itself, there

> will, firstly, be other substances, and entities and *Ideas* besides those which are asserted, and secondly these others will be prior *entities*, if essence is *entity*. And if the posterior *entities* and the prior are severed from each other, (a) there will be no knowledge of the former,[11] and (b) the latter will have no being.
>
> (1031a30–b5, my amendments in italics)[12]

It can be inferred that each thing and its essence are the same, but that remains true only in principle in relation to the εἶδος of each thing. If essence is associated with a *form* as an organizing principle, then an individual as a compound of matter and form cannot be the same as its essence.

Furthermore, an individual in virtue of itself can be deemed the same as its essence until accidentals enter the picture:

> for each thing is thought to be not different from each *entity* and the essence is said to be the οὐσία of each thing. Now in the case of accidental unities *the two* would be generally thought to be different, e.g., white man would be thought to be different from the essence of white man.
>
> (1031a15–20 with slight modifications)

For example, Socrates, inasmuch as we think about him with regard to the *form* that makes him definable as a human being, is the same as his essence, but that is just a definitional construct. For, taken at any moment of his life, Socrates as essentially human is first of all a combination of matter and form, and second a combination of his essential predicates with unlimited accidental characteristics making *a* Socrates (Socrates in a particular moment) not identical with his essence. There cannot be identity between a thing understood as a form and matter compound and the same thing coupled together with some circumstantial developments, because in doing so we would equate essence with essence-plus-accidentals, and that will level all distinctions between different accidentals, but Aristotle says that that sounds absurd (1031a20–28).

Aristotle, when he talks at Z.vi about each thing being the same as its essence, repeatedly adds a qualification: each thing must be taken in the primary sense, as a self-subsistent thing, or thing in virtue of itself (1031a19–28; 1031b13–14; 1032a5). He starts the argument of the chapter with a proviso—*what if* we consider things in a καθ' αὑτό way (1031a28)—and concludes the chapter with the statement that the things which are spoken of καθ' αὑτό are the same as essence. All this restricts the argument about sameness of each thing with its essence to things which are said in virtue of itself. If we reflect on the content of the prior discussion in Book Z, it becomes apparent that a thing taken καθ' αὑτό is a thing in its essential predication, which amounts to the exclusion of matter, and accidental attributes. The claims about the identity of a thing in virtue of itself and its essence equals to a tautological syllogism about the identity of an *essence* and the *essence*. Again, a Socrates being spoken of καθ' αὑτό would refer to essential characteristics of Socrates as a species. Small wonder that in such a case Socrates will be identical with his essence.

In a similar way we should read *Metaphysics* Z.xi where Aristotle returns to the claim that primary οὐσίαι are the same as their essences (1037a35–b2),[13] because, in the following passage, Aristotle adds that by primary οὐσίαι he means the entities which do not admit the presence of something in something (τῷ ἄλλο ἐν ἄλλῳ, 1037b3–4). On the one hand, it is a clear indication that οὐσία without being something in something would be just an εἶδος without matter, and that suggests that he considers οὐσία in this sense as εἶδος or essence. On the other hand, it should strike the reader that the description of οὐσία as something that does not admit ἄλλο κατ' ἄλλου matches the requirement that Aristotle sets in Z.iv for something to which the term τὸ τί ἦν εἶναι can be applied (1030a10–11; 1030a4 238–240). As it was discussed in the section on τὸ τί ἦν εἶναι, the definition as a formula should not imply the predication of one thing in another, and as Aristotle concluded that can be applied only to species of a genus. Thus, the passage from Z.xi, just like arguments in Z.vi, concedes the sameness of essence and each thing, but each thing is basically considered in its essential predication, as οὐσία without matter, or εἶδος as essence, and that amounts to the claim about the sameness of *essence* (τὸ τί ἦν εἶναι) and *essence* (οὐσία … μὴ λέγεται τῷ ἄλλο ἐν ἄλλῳ).

Εἶδος as Species and Individual Form

In chapters vii–ix of *Metaphysics* Book Z, Aristotle furthers his position on the concept of εἶδος. He expounds on the issues of individual entities as being compounds of matter and *form* (εἶδος). He defends a close association of essence with *forms* of individuals (1032b14), which is itself not generated (1033b5–8), but the form is being passed in potentiality from the *psyche* of the producer (1032b13–14), and stands for the internal structure of οὐσία or "the οὐσία without matter" (1032b14). It applies both to animate and inanimate objects: say, a *form* of a man is potentially in seminal fluids, and a form of a chair is coming from the *soul* of the carpenter. If we put together on the one hand Aristotle's arguments about essence (τὸ τί ἦν εἶναι) as definition that can be said only of a species, and on the other hand claims about *form* (εἶδος) as an internal structure of the object which at the same time stands for essence, it raises a major question about Aristotle's understanding of *form*: in the context of a thing's internal structure: is *form* (εἶδος) synonymous with *species* (εἶδος)?

In the introduction, I mentioned that there is nothing unusual in admitting the ambiguity of the term εἶδος in Aristotle's philosophy and there is an acceptable range of translations *from* form or shape *to* species, genus, kind, depending on the context. However, some interpretations of the meaning of εἶδος get to a point where the term is applied to two ontologically distinct entities. Broadly, there are two interpretations:

> E1: one unified concept of εἶδος: εἶδος as species and εἶδος as an internal structure of a particular compound are the same concept. Various interpreters suggest that εἶδος as an internal structure of οὐσία in this context (the way

Aristotle describes it in Z.vii–ix) is the species that an individual belongs to.[14] In this sense εἶδος as an internal structure of οὐσία in *Metaphysics* does not really differ from εἶδος as species or essence.

E2: two separate concepts for the word εἶδος:

(1) εἶδος as a species;
(2) εἶδος as a form of an individual that is predicated of the matter of which it is composed and stands for an εἶδος different from the species concept.

E2 assumes not just an ambiguity of the term εἶδος but its apparent duality, where εἶδος as an individual *form* stands for the essence of the compound, while εἶδος as species is not really an entity and stands for the generalization of a compound of *form and matter.*

The latter view is supported by many (e.g., Ackrill 1972; Code 1984; Driscoll 1981; Gill 1989; Lewis 1991; Loux 1979; Witt 1989), and it is worth noting that some have claimed it as a dominant interpretation and even list these interpretations in order *from* less accurate (E1) *to* more accurate (E2) (Cohen 2016). To a large extent I do not agree with this view.

E1 and E2 are two different ways of seeing the development of Aristotle's thought from *Categories* to *Metaphysics.* According to E1, in *Categories* Aristotle differentiates between first substantial beings such as Socrates or Callias and secondary ones such as humans or dogs, while in *Metaphysics*, according to E1, Aristotle talks about *forms* which are οὐσίαι, they are common to members of species, and they are what allow us to define the essence of the species. Here we witness some type of identification of primary οὐσίαι with the secondary ones if we use the language from the *Categories.* This shift results from the introduction of the hylomorphic model; individuals have a common *form* which is embedded in different matter.

In contrast to that, E2 argues that in *Metaphysics*, contrary to *Categories*, εἶδος as species does not refer to οὐσίαι at all. The trajectory of Aristotle's thought in this case goes from the *Categories* with its concept of secondary οὐσίαι to *Metaphysics*, where *form* as species is stripped of its predication as οὐσία. According to this interpretation the only οὐσίαι in *Metaphysics* are individual οὐσίαι or individual *forms*. Species in this sense *exist* not as any type of being but simply as a generalization of the form-matter compound. According to E2 the term εἶδος is not just contrasted with different things depending on the context, it stands for two distinct categories in Aristotle's *Metaphysics.*

I argue that this problem of the category εἶδος should be approached with a close consideration of the category οὐσία and the notion of essence. On the one hand, the problem of understanding οὐσία whether as *some this* or *what is* described earlier will be easier to work out if we figure out the problem of the duality of εἶδος. On the other hand, I propose that we can make sense of the argument about the relationship between each thing and its essence only if we accept that εἶδος as species is not a different concept from individual *forms*. For, if one tries to reconcile the two interpretations of whether essence and a thing

are the same or not as it was explained in the previous section, with the question of whether *forms* in Z.vii–ix as internal structures of οὐσίαι are to be identified either as merely individual-forms or also as species-forms which are common for individual instances, we will have the following pair of propositions:

a) E2 aligns with the proposition that each thing is identical with its essence, where essence is taken individually but not as species.
b) It seems logical to suggest that according to E1—which sees εἶδος as individual form and species (i.e., as a form common to all members)—essence as *form* and each thing as a compound are not identical.

Proposition (a) is consistent, because if one assumes that Aristotle claims that there is a separate sense of εἶδος as an individual *form* and internal structure of οὐσία, and this individual form defines what an entity is, because Aristotle makes it clear in Book Z.vii–ix that the immanent *form* of a substantial being is its organizing principle and stands for its essence (e.g., 1032b14), then this *form* as essence is something delimited to an individual akin to an individual essence, and it should be identical with that individual. I am not saying that all authors who side with E2 concede the point that each thing and its essence are the same, but it seems to me that it should follow, and stating otherwise will create an internal conflict: namely, it would mean that apart from an individual οὐσία, individuals will have some other sort of essence. If we accept (a), provided that we rely on the conclusions from the previous section, it becomes impossible to read *Metaphysics* coherently, since it forces us to admit the identity of essence and each individual thing as legitimate—to accept, in other words, individual essences.

In the case of (b), if we accept that εἶδος as a species common to all its instantiations and individual-εἶδος are the same, then a twofold conclusion seems to arise: on the one hand, there are individuals taken as a compound of form and matter supplied additionally with a number of accidental attributes, and, on the other hand, there are *forms* of those individuals as their internal structures which stand for their essence as being examples of species of a genus. It seems inevitable to presume that the denial of the duality of the term εἶδος squares with the point of essence not being identical with each thing. In principle, I can concede the existence of some independent arguments in favor of the duality of the term εἶδος in *Metaphysics*, but in this context any attempt to avoid the claim that there are no individual essences for Aristotle seems to me ineffective. If we see the *form* of Socrates as something that is separate from his *form* as species, then he should be viewed as an individual essence. It can be argued that *this organizing form* of Socrates is not the same as Socrates as a compound (form and matter), but this does not make individual *form* closer to the species *form*.

I am committed to the view that essence and each thing for Aristotle are not the same and, correlatedly, to the claim that *form* as species and individual forms are not two different concepts. I consider the proof that each thing is not the same as its essence as independent from the discussion about the different

senses of εἶδος, but I see my take on the dispute about understanding *form* and species as a necessary conclusion stemming from the discussion on *what it was to be* for an entity.

At the same time, the commitment to the joint claim (b)—that essence and each thing are not the same, and that *form* as species and *form* as an internal structure of the compound are the same concept—raises the questions about variability of individuals within the same species. The acceptance of the identification of εἶδος as species and εἶδος as individuals can potentially exclude εἶδος from what constitutes the principles of individuation, i.e., what stands for the difference between various representatives of the same species such as Socrates and Callias. The claim about sameness of *form* for different individuals grouped in one species forces us to accept that matter (primarily) and accidental attributes become the only sources of individuation for Aristotle.

The last paragraph of Book Z.viii is additional textual support for the exclusion of εἶδος from the principles of individuation and for viewing matter as responsible for variability within the species.

> And when we have the whole, such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different, but the same in form; for their form is indivisible.
>
> (1034a5–7; see also *Metaph.* 1016b32; Z. 1034a5–8, 1035b27–31; I. 1054a34; A. 1074a31–34; *De Caelo*, 278a6–b3)[15]

Based solely on this passage it is hard to see how one would object to the sameness of εἶδος within the species. Nevertheless, individuation of οὐσίαι by means of matter is a problematic issue, for this claim runs into multiple conflicts with other parts of Aristotle's philosophy. First, as W. D. Ross mentions, there are intelligible substances which have no matter—how then can we figure out their individuation? Second, Ross subsequently points out that for Aristotle matter is unknowable (*Metaph*. 1036a8), which "leads to the paradoxical conclusion that the most real things in the world (apart from the pure substances) are not fully knowable" (1923, 176). I think Ross made good points, however as far as unknowability of matter is concerned it is important to be clear about how and why matter is unknowable. What is known is always *form*; qua matter, any matter is prior to the *form* of what it may become. But any particular material already has some *form* for Aristotle, and in that sense it *is* knowable.

A more serious counter claim to the individuating power of matter comes from Aristotle's teaching on the generation of living beings and their mechanisms of heredity. In biological works (especially *Gen. an.*), Aristotle develops a view that matter during gestation comes only from the female contribution to generation. And if we see matter as the only factor of individuation, then it will mean that all individual characteristics come from female progenitors, while male parents become only *responsible* for attribution of offspring to species (εἶδος). That is not only absurd due to a readily available data on individual similarities between

fathers and offspring, but it also contradicts multiple claims about formal seminal contribution from the female.

A thorough look at Aristotle's theory of generation in the biological works does not allow one to concede that individuation is only from matter. In a short summary, Aristotle's theory of sexual generation tells that female and male seminal fluids are, in potentiality, what the animal from which it comes is in actuality. And the female residue, which is first and foremost a material cause of the offspring, is acted upon by a male reproductive fluid. The latter acts like a compound cause carrying in it the attributes of efficiency, form, and end-directed processes. All this should be leveled by a remark that female contribution is not formless as well, according to Aristotle's study, male and female reproductive fluids carry in themselves some generating movements or powers, which allow the embryo to develop and grow according to the εἶδος common to their parents. Generative parents are not merely male and female representatives of the species, in addition they have their own peculiar characteristics. It also implies that variability among the members of the same species comes from these *powers* which supplement *form* and *matter* and are provided by parents as a part of a mechanism of heredity. Aristotle does not say that the εἶδος of the offspring is transmitted from the parent, instead he refers to what reproductive fluids carry as to "the *logos* of the movements" (ὁ λόγος τῆς κινήσεως, *Gen. an.* 767b21–22), or the powers which carry the *logos* (*Part. an.* 640a22–23). Thus, the logos of the movement from both male and female carries not only powers of the εἶδος and even of the genos, but individual and peculiar information responsible for variation within the same species (767b30).

In light of that, it seems logical to conclude that variations among the members of the same species certainly have not only a material but also a formal character. Accepting the interpretation about the existence of individual *forms* and *essences* (E2) would allow us to validate these arguments from biological works much easier. However, I do not want to renounce my claim that E2 is an erroneous reading suggesting duality of εἶδος in Book Z. The solution to the problem of individuation can be afforded by means of a certain view on the concept of εἶδος and Aristotle's essentialism in general. In its bare minimum this view requires:

1) to admit the lack of rigidness in Aristotle's take on essence to the effect that a definition of an entity should not be viewed as something that does not permit some flexibility;
2) to admit subsequently the flexibility in the scope of εἶδος, meaning that the εἶδος common to all individuals of the same species is not something rigid, and variability in its instantiations are acceptable within the limit.

It does not object to the point that individuation for Aristotle comes from powers and external accidental characteristics, and it furthers the discussion about individuation.

A detailed consideration of the problem of flexibility in Aristotle's concept of εἶδος as species is the subject of a separate study which requires engaging more

with his biological works than with *Metaphysics.* Here, I would like to outline briefly only some of the main points that allow us to tell how the problem of individuation within E1 can be solved. The plasticity of the concept of εἶδος as species in biological works can be first proven by concluding that nowhere in his biological works does Aristotle give a definition of εἶδος. Furthermore, it is highly problematic to see Aristotle define any biological species in any of his works, except for defining humans as a political animal, or an animal with a peculiar feature of logos. In his biological works, Aristotle uses parts and functions of animals for their classification into larger groups more often than trying to classify them at the level of species. I second Pellegrin regarding the argument that what we refer to as biological species is merely an empirical notion for Aristotle and it has no theoretical function for his biology (1985, 112). David Balme argues for the interchangeability in the use of the terms *genos* and εἶδος by Aristotle in biological works, where both designate realities of a variable level of generality (1962, 81–98). Moreover, elsewhere Balme explicitly states that Aristotle's account of εἶδος as species is not essentialist (1987a). Contrary to Balme, James Lennox insists on the possibility of assigning the attributes of essential predication to εἶδος, although he distinguishes between typological and teleological essentialisms and claims that only the latter can be applied to Aristotle's concept of εἶδος. An objection to typological essentialism would most likely support the depiction of εἶδος as something that admits variations. Since typology is a system of classification of natural/living species based on singling out some general types, and all members of a particular type reflect the same essential nature (in other words they conform to the same set of characteristics), it becomes clear that teleological essentialism with its commitment only to claims about the same *goal* of all members of the species is well possible to reconcile with a flexible scope of εἶδος as species (Lennox 2001).

The variations within the εἶδος as species can include some phenotypic differences (which for instance in the case of Socrates and Callias can be minor, but in the case of different breeds of dog more so) as well as behavioral, or even differences in functionality. Often these variations are neutral, they designate roughly a variable level of generality which one expects to see among representatives of the same species. It is worth noting that variations sometimes can be deemed better or worse, or even threaten the standing of the individual within the species. Aristotle's gradual scale of deviations described in *Generation of Animals* IV is a good proof of that (*Gen. an.* 766b15–767b7). Here, I follow Anthony Preus' interpretation of Aristotle's concept of εἶδος that suggests that it is also normative (1979). We can see that the number of characteristics conditionally necessary for the fulfilment of the *telos* is flexible. Despite the degree of digression, Aristotle would consider individuals who possess these deviations as representatives of their species. Therefore, these incidental deviations can be reconciled with the overarching purposive effort of generation which is reproduction of a functional representative of species. This requires acknowledging that the fulfillment of the purposive effort admits variability of realization.

At the same time, the crucial distinction of this interpretation, which does not make this concept of εἶδος very Platonic, states that the variability of εἶδος

does not admit an ideal or master εἶδος, even though it concedes the existence of not only neutral but also a better or worse variability. For Plato, individuals partake of a Form where that participation is described in the language of *more or less* (475d1–480a13). For instance, some type of justice is more *just* because it partakes in a higher degree to the Form of justice. Instead, I am saying that for Aristotle, Socrates and Callias share a common εἶδος of the human species, but Socrates and Callias are not identical because they are made of different matter, because they have a share of different accidental attributes, because they were differently influenced by powers transmitted from the parents, and consequently they admit a variability of the εἶδος of human species. In the case of Socrates and Callias their variability of εἶδος is neutral, and neither of them is closer or further away from the definition of species. At the same time, it is worth noting that Aristotle's biology gives good room for discussions about non-neutral variability which jeopardize the standing within the species, as in the case of serious physiological deviations or monstrosities.

Reading Aristotle's discussions in *Metaphysics* Book Z in connection with other works, and especially biological treatises, enables validation of crucial claims about the concept of εἶδος as species and an internal structure of individual compound. According to this view the following can be said of εἶδος:

(1) it is internal structure that makes entities (οὐσίαι) what they are, it makes them definable realities, it makes them susceptible of definition (essence);
(2) it stands for species that is common to individuals but does not exist independently of them;
(3) it delimits a certain level of generality;
(4) it is not something rigid but admits normative and non-normative variations;
(5) it objects to accusations in typology without violating the constraints of essentialism.

These characteristics afford a view on εἶδος that is consistent with Aristotle's discussion about what something is in virtue of itself (essence), and with the discussion about οὐσία. The tension in the meaning of οὐσία between *what is* and *some this* seems to be mitigated if we accept that what makes οὐσία a definable reality is not the same as the entity itself, but it is rather considered as some sort of descriptive and normative proposition related to physiology, phenotype, functionality, and habits, with all of them admitting variations.

Notes

1 This continuity of philosophical ideas between Aristotle and Plato comes in handy on multiple occasions for interpreters. For instance, it is relevant for one of the interpretations on unchangeability of biological animal species for Aristotle.
2 Aristotle further develops this point in other chapters of Book Z (see *Metaph*. Z.iii.1034a5–8; x.1035b34–1036a8; xi.1036a29; xv.1040a28–b2).
3 All translations from *Metaphysics* are by Ross (2001) unless otherwise indicated, with minor alterations and with interpolations of Greek text.

4 A search through the literature reveals that authors agree on the central role of this phrase in understanding what is essence as definition for Aristotle. See Angioni (2014, 89–91), Burger (1987, 60), Furth (1988, 238–240).
5 Similar interpretations were given by Furth (1988, 239), Burnyeat (1979, 24–25), Peramatzis (2010, 146–157), as well as Gill (1989, 138–144).
6 Although it would be a contradiction because all red-blooded animals are limited to four motion points according to Aristotle.
7 On the connection between syllogisms and existence in Aristotle's *Posterior Analytics*, see Karbowski (2019).
8 Alternatively, *beingness* seems to be an accurate translation as well. The latter version is popular among Heidegger's English-language followers inspired by his rendering *ousia* as *Wesenheit*. It is worth mentioning though that the tradition of translating οὐσία as substance goes all the way back to the Latin translation of it as *substantia*, which oddly rather stands for the Greek ὑπόστασις. Curt Arpe gives an interesting explanation, from a linguistic point of view, of how οὐσία became *substantia* in Latin (1941, 65–78).
9 This duality of οὐσία is made explicit in the text several times. For instance: Arist. *Metaph*. 1031a17–18. 1039b 20–22.
10 A brief comparison of 1031b11–15 and 1931b28–1032a6 with 1037a33–b7 and 1043b2–4 reveals this.
11 The ideas, or if we apply to the relationship of essence and each thing, there will be no knowledge of essence.
12 Another problem with such interpretation of the relationship between essence and each thing falls into the territory of the notorious "*third man argument*" which Aristotle did not forget to mention in Z.vi as well. See 1032a2–4.
13 For Burger the analysis of this chapter is the way to settle with the ultimate conclusion about the sameness of each thing with its essence for Aristotle (1987, 68).
14 This view is supported in that or another way by Irwin (1988). See especially Woods (1993) for a fair analysis of this debate.
15 This passage represents a particular difficulty for individual *forms* believers, because their position that Socrates and Callias have individual forms (which are supposed to differ) is at odds with Aristotle's explicit statement that different people are the same in εἶδος (1034a7–8). To maintain the coherence of their positions some proponents of individual forms try to extricate themselves from this predicament by means of offering three different translations to the word εἶδος in this sentence: form, species, and kind. See Frede and Patzig (1988, cited in Woods 1993, 407).

Bibliography

Ackrill, J. L. 1972. "Aristotle's Definitions of *Psyche*." *Proceedings of the Aristotelian Society* 73: 119–33.

Angioni, Lucas. 2014. "Definition and Essence in Aristotle's 'Metaphysics' vii 4." *Ancient Philosophy* 34, no. 1: 75–100.

Arpe, Curt. 1941. "Substantia." *Philologus* 94, no. 1–4: 65–78.

Balme, D. M. 1962. "Γένος and Εἶδος in Aristotle's Biology." *Classical Quarterly* 12, no. 1: 81–98.

———. 1987a. "Aristotle's Biology Was Not Essentialist." In *Philosophical Issues in Aristotle's Biology*, edited by Allan Gotthelf and James G. Lennox, 291–312. Cambridge: Cambridge University Press.

———. 1987b. "Teleology and Necessity." In *Philosophical Issues in Aristotle's Biology*, edited by Allan Gotthelf and James G. Lennox, 275–86. Cambridge: Cambridge University Press.

Brody, Baruch A. 1973. “Why Settle for Anything Less Than Good Old-Fashioned Aristotelian Essentialism?” *Noûs* 7, no. 4: 351–65.

Burnyeat, Myles. 1979. *Book Zeta of Aristotle’s Metaphysics: Notes on Book Zeta of Aristotle’s Metaphysics*. Oxford: Sub-faculty of Philosophy.

———. 2001. *A Map of Metaphysics Zeta*. Pittsburgh: Mathesis Publications.

Burger, Ronna. 1987. “Is Each Thing the Same as Its Essence?: On *Metaphysics* Z.6-11.” *The Review of Metaphysics* 41, no. 1: 53–76.

Charles, D. 1993. “Aristotle on Substance, Essence, and Biological Kinds.” In *Proceedings of the Boston Area Colloquium in Ancient Philosophy,* VII, edited by John J. Cleary, 227–61. Lanham: University Press of America.

Code, Alan. 1984. “The Aporematic Approach to Primary Being in *Metaphysics* Z.” *Canadian Journal of Philosophy* 10: 1–20.

Cohen, S. Marc. 2016. “Aristotle’s Metaphysics.” The Stanford Encyclopedia of Philosophy, edited by Edward N. Zalta. Updated 15 June, 2016. https://plato.stanford.edu/archives/win2016/entries/aristotle-metaphysics/.

Crane, Tim and David Wiggins. 1998. “Metaphysics.” In *Philosophy 1: A Guide Through the Subject*, edited by A. C. Grayling, 181–250. Oxford: Oxford University Press.

Dahl, Norman. 1997. “Two Kinds of Essence in Aristotle: A Pale Man Is Not the Same as His Essence.” *Philosophical Review* 106, no. 2: 233–65.

Devereux, Daniel. 2011. “Aristotle on the Form and Definition of a Human Being: Definitions and Their Parts in *Metaphysics* Z 10 and 11.” In *Proceedings of the Boston Area Colloquium in Ancient Philosophy* XXVI, edited by Gary Gurtler and William Wians, 167–210. Leiden: Brill.

Driscoll, John A. 1981. “EIΔH in Aristotle’s Earlier and Later Theories of Substance.” In *Studies in Aristotle*, edited by Dominic J. O’Meara, 129–59. Washington: Catholic University of America Press.

Furth, Montgomery. 1988. *Substance, Form, and Psyche: An Aristotelian Metaphysics*. Cambridge: Cambridge University Press.

Gill, Mary Louise. 1989. *Aristotle on Substance: The Paradox of Unity*. Princeton: Princeton University Press.

Gotthelf, Allan. 2012. *Teleology, First Principles, and Scientific Method in Aristotle’s Biology*. Oxford: Oxford University Press.

Grene, Marjorie. 1974. “Is Genus to Species as Matter to Form? Aristotle and Taxonomy.” *Synthese* 28, no. 1: 51–69.

Irwin, Terrence. 1988. *Aristotle’s First Principles*. Oxford: Clarendon Press.

Joachim, Harold H., trans. 2001. “On Generation and Corruption.” In McKeon 2001, 470–535.

Karbowski, Joseph. 2019. “Syllogisms and Existence in Aristotle’s *Posterior Analytics*.” *Manuscrito* 42, no. 4: 211–42.

Kung, Joan. 1977. “Aristotelian Essence and Explanation.” *Philosophical Studies* 31, no. 6: 361–83.

Lennox, James G. 2001. *Aristotle’s Philosophy of Biology: Studies in the Origins of Life Science*. Cambridge: Cambridge University Press.

Lewis, Frank A. 1991. *Substance and Predication in Aristotle*. Cambridge: Cambridge University Press.

Loux, Michael J. 1979. “Form, Species and Predication in *Metaphysics*, H, and Θ.” *Mind, New Series* 88, no. 349: 1–23.

McKeon, R., ed. 2001. *The Basic Works of Aristotle*. New York: The Modern Library.

Parsons, Terence. 1969. "Essentialism and Quantified Modal Logic." *The Philosophical Review* 78, no. 1: 35–52.

Peck, A. L., ed. and trans. 1963. *Aristotle: Generation of Animals*. Cambridge: Harvard University Press.

———. 2006. *Aristotle: Parts of Animals*. Cambridge: Harvard University Press.

Pellegrin, Pierre. 1986. *Aristotle's Classification of Animals: Biology and the Conceptual Unity of the Aristotelian Corpus*. Rev. ed. Translated by Anthony Preus. Berkeley: University of California Press.

Peramatzis, Michail M. 2010. "Essence and *Per Se* Predication in Aristotle's *Metaphysics* Z.4." *Oxford Studies in Ancient Philosophy* 39: 121–182.

Preus, Anthony. 1979. "*Eidos* as Norm in Aristotle's Biology." *Nature and Systems* 1, no. 2: 79–103.

Rorty, Richard. 1974. "Matter as Goo: Comments on Grene's Paper." *Synthese* 28, no. 1: 71–77.

Ross, W. D. 1923. *Aristotle*. London: Methuen & Co.

———, ed. 1975. *Aristotle's Metaphysics*. Oxford: Clarendon Press.

———, trans. 2001. "Metaphysics." In McKeon 2001, 689–935.

Tredennick, Hugh and E. S. Forster, eds. and trans. 1960. *Aristotle Posterior Analytics: Topica*. Cambridge: Harvard University Press.

Whiting, Jennifer E. 1986. "Form and Individuation in Aristotle." *History of Philosophy Quarterly* 3, no. 4: 359–77.

Witt, Charlotte. 1989. *Substance and Essence in Aristotle: An Interpretation of Metaphysics VII-IX*. Ithaca: Cornell University Press.

Woods, Michael. 1993. "Form, Species, and Predication in Aristotle." *Synthese* 96, no. 3: 399–415.

14 Πολιτεία in Aristotle's *Nicomachean Ethics*

J. J. Mulhern

Introduction

In this paper, I comment on the 18 actual occurrences of πολιτεία in the *Nicomachean Ethics* as they appear in Bywater's text (retrieved from the Thesaurus Linguae Graecae) as well as on one that is understood by scholars though it doesn't actually occur in the text. At either 18 or 19, the number is small in comparison to the 522 in the *Politics*; but the occurrences still may be worth considering in detail, since scholars have relied on the *Nicomachean Ethics* in trying to find a doctrine about the best πολιτεία that they have had difficulty finding in the *Politics*. The 18 are distributed unevenly, with the balance in Book VIII (7)—a book ostensibly on φιλία (in Greek not merely love or friendship but "wide enough to include all relations in which things come together," restricted here to associations among human beings [Joachim 1962, 244])—and Book X (5) on pleasure. The other actual occurrences are in Books II (2), III (1), V (2), and VI (1). The understood occurrence is in Book V.

As with the *Politics* so in the *Ethics*, translators often use *constitution* in the sense of the arrangement of offices to render πολιτεία in the *Nicomachean Ethics*,[1] following Aristotle in the *Politics* (τάξις τῶν τε ἄλλων ἀρχῶν, the arrangement [or ordering] of the different offices [or officers], *Pol.* 1278b9; my trans.). But since in the *Politics* πολιτεία has four main senses—citizenship, citizen body, constitution (arrangement of offices), and regime (government) (Mulhern 2015, 84–102)—along with a variety of uses (for example, the so-called or καλουμένη πολιτεία, *Pol.* 1295a33), as has been clear ever since Bonitz published the *Index Aristotelicus* in 1870, one should proceed cautiously here, as some translators are more inclined than others to do. Martin Ostwald, for example, cautiously used "political system" in four of the 18 instances (see Table 14.1), which might be a way of referring to citizenship, since he notes in his glossary that πολιτεία "designates the peculiar bond that unites citizen to citizen to form the state, and, in fact, it is *politeia*, or the nature of this bond, that gives the state its identity" (Ostwald 1962, 312). I shall examine each of the occurrences in context in the order of occurrence to see what it is most likely to mean. There appear to be good contextual reasons for citizenship in three cases, citizen body in four, regime in five, and a mixture in two; the text is inexplicit in four cases. Thus, while the

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Table 14.1 Equivalents of Πολιτεία in Aristotle's *Nicomachean Ethics* According to Some Scholars (Latin as in Bonitz) b. = Bonitz; g.-j. = Gauthier-Jolif; m. = Mulhern; o. = Ostwald; r. = Ross

Bekker line	*Citizenship ius civitatis, potestas in civitate*	*Citizen body universitas civium*	*Constitution (arrangement of offices) civitatis forma et ordo*	*Regime potestas in civitate*	*Notes*
II.1.1103b6		m.	o., r.		g.-j., not translated
1103b6		m.	g.-j.		o., r., not translated
III.3.1113a8			r.	m.	g.-j., formes du gouvernement; o., political systems
V.2.1130b32	m.		r.		g.-j., communauté politique; o., political system
V.7.1135a4		m.	o., r.		g.-j., formes du gouvernement
[1135a5]			g.-j., o.	m.	r., not supplied
VI.8.1142a10	m.				g.-j., constitution politique; o., political system; r., form of government
VIII.10.1160a31			o., r.	m.	g.-j., constitutions politiques
1160a32			g.-j., o., r.	m.	
1160a34					g.-j., régime constitutionnel; b. (μίξις), m. mixture; o., constitutional government; r., polity
1160b20			r.		g.-j., not translated; m., mixture; o., constitutional kind of government
1160b21			o., r.	m.	g.-j., constitutions politiques
VIII.11.1161a10			o., r.	m.	g.-j., constitutions politiques
VIII.14.1163b5		m.			g.-j., constitutions politiques; o., political systems; r., constitutional arrangements
X.9.1181b7	m.		g.-j., o., r.		g.-j., régime politique
1181b14			b. (*civitatis forma et ordo*), o., r.		g.-j., régime politique; m., inexplicit
1181b17			o., r.		g.-j., régime politique; m., inexplicit
1181b19			o., r.		g.-j., régime politique; m., inexplicit
1181b21			b., o., r.		g.-j., régime politique; m., inexplicit

scholarship shows many occurrences of *constitution*, in what follows the reader should bear in mind that Aristotle may have been thinking of something else when he used πολιτεία.

Book II (Two Occurrences)

In Book II, Aristotle is explaining that lawgivers make the citizens good by habituating (ἐθίζοντες) them (*Eth. Nic.* 1103b3-4), and he goes on here to say that the good πολιτεία differs from the bad (φαύλη) πολιτεία in this (*Eth. Nic.* 1103b6 [two occurrences]). While the oldest literary occurrence of πολιτεία, found in Herodotus, has the sense of citizenship (Hdt. IX.34), that is unlikely to be the sense here, since citizenship, which is a complex condition rather than, say, an action or an individual human being, is not the sort of thing that can be habituated, though it might involve habituation and citizens might be habituated to it. Constitution, or arrangement of offices, also is an unlikely candidate, since arrangements are not the sorts of things that can acquire habits, though people can become habituated to them. Likewise the regime is unlikely to be what Aristotle has in mind, since the regime—those who occupy the offices at any given time, while its members might be habituated, will be fewer than the citizens, and the lawgivers will be concerned with all the citizens. With these possibilities eliminated, Aristotle hardly can mean anything but that the good citizen body differs from the bad citizen body in the way it is habituated. Thus the sense here apparently is citizen body.

Book III (One Occurrence)

In Book III, Aristotle is mentioning the ancient πολιτεῖαι as Homer portrayed them, in which, as he says, the kings announced what they had chosen to the people (*Eth. Nic.* 1113a8). Here the citizen body is not the subject, nor is the condition of citizenship nor the arrangement of offices. The world depicted in the Homeric epics antedates the eighth-century development of the πόλις, the Homeric πόλις being perhaps, rather, the citadel or high city or the inhabitants; and πολιτεία is not a Homeric word (Cunliffe 1924). There is a question whether one should even speak of cities or citizenship in the classical sense at this stage (Duplouy and Brock 2018). Here Aristotle is talking about the behavior of the kings—the regimes of the day. The sense is regime.

Book V (Two Occurrences)

In the first occurrence in Book V, Aristotle has τοῖς κοινωνοῦσι τῆς πολιτείας—those partnering in the πολιτεία (*Eth. Nic.* 1130b32); he goes on shortly to point out that the partners can have equal or unequal shares in it. One would not share in the arrangement of offices (what would it be to share in an arrangement?), though one might occupy an office and so be a partner in the regime. The citizen body is unlikely to be what Aristotle has in mind, since, for him, one is either in or outside (ἐν, ἐκτός, or ἔξω) the citizen body. Κοινωνέω is, like μετέχω, one of the words

used for sharing, especially in the citizenship—the Greek way of talking about being a citizen. Aristotle seems most likely to be thinking of being a partner in the citizenship as at the beginning of *Politics* III.4 (*Pol.* 1276b20–21). The sense then would be citizenship.

In the next occurrence (*Eth. Nic.* 1135a4), Aristotle is discussing justice related to the citizen, which he divides into justice related to φύσις and justice related to νόμος; and so he is preparing to address the well-known Sophistic distinction—a distinction that he ultimately rejects since, for him, νόμος is indispensable to the φύσις or growth of the πολιτεία (cf. *Pol*. III.17–18 and 1292a32). He says:

> What is just as determined by agreement and advantage is like measures: measures for wine and for grain are not equal everywhere; they are larger where people buy and smaller where they sell. In the same way, what is just not by nature (φυσικά) but by human enactment (ἀνθρώπινα) is no more the same everywhere than constitutions (πολιτεῖαι) are.
>
> (*Eth. Nic.* 1134b35–1135a5; trans. Ostwald 1962, 132, Greek supplied)

Ostwald gives a clarifying note:

> What Aristotle seems to mean is that in states where the citizens are buyers rather than sellers of a given commodity, e.g., grain, the official measures tend to be on the large side, since evidently buyers in Greece wanted to make their units of purchase as large as possible; while in states where grain was sold rather than bought, the measures would tend to be smaller. In Athens, for example, where the citizens would usually buy rather than sell grain, a *medimnos* would be larger than what would be called *medimnos* in Sicily, where the citizens would be more likely to sell than to buy grain.
>
> (1962, 132)

Here the measures vary with the people and the economies of their land. Thus, though Ostwald accedes to the common preference for *constitution* in translating here, the sense seems to be citizen body: what is just not φυσικά but ἀνθρώπινα is no more the same everywhere than citizen bodies are.

What of the contrast of φυσικά (related to φύσις) and ἀνθρώπινα (human)? The ἀνθρώπινα are not simply matters of nature or growth but of the different kinds or directions or stages of growth found in different places and in different human situations. While human beings are convention-developing animals, they develop different conventions in different circumstances.

This actual occurrence is followed by the understood occurrence (Arist. *Eth. Nic.* 1135a5). It will be instructive for understanding what πολιτεία might mean here if it actually did occur to look at selections from the last half-century or more of scholarship on this line. The established interpretation, as it was understood by scholars such as W. F. R. Hardie in 1968, quoting Sir David Ross' translation, was that "there is but one which is everywhere by nature the best" (Hardie 1968,

205; Ross 1954, 124). It was assumed that, if πολιτεία were to be supplied in this line, its meaning could be discerned clearly and that it would have the meaning of *constitution* rather than any of its other attested meanings. It was assumed also that πανταχοῦ (everywhere, for every place) was within the scope of the quantifier governing πολιτεία; the sense of "by nature" (κατὰ φύσιν) was taken largely for granted. Hardie again followed Ross when it came to explaining φυσικόν in rendering πανταχοῦ τὴν αὐτὴν ἔχον δύναμιν (Arist. *Eth. Nic.* 1134b19; see also 25–26) by "having everywhere the same force" (Hardie 1968, 204), though Aristotle views φύσις as only for the most part rather than uniform (as, arguably, *Eth. Nic.* 1112b9, 1161a27, 1164b31; and surely *Ph.* 198b35). Shortly after Hardie's book came out, an alternative interpretation appeared, which was that, for every place, there is only one πολιτεία that is best κατὰ φύσιν for it, putting the quantifier over places first (Mulhern 1972). While the established interpretation asserted that, whatever place you choose, you will find that the best constitution by nature for that place is the best constitution by nature for every other place as well, the alternative interpretation asserted only that, whatever place you choose, only one πολιτεία will be best κατὰ φύσιν for that place.

About a decade later, Pierre Aubenque, apparently independently, offered another alternative interpretation to a similar effect but in a different way, according to which πανταχοῦ ought to be interpreted as

> distributive (*distributif*), and not collective (*collectif*); put otherwise, there is not a good constitution that is valid for all countries (and we might add, for all times), but the best constitution is for each time that which fits the nature of the country and of its residents (*à la nature du pays et de ses habitants*).
>
> (1980, 154; my trans.)

Aubenque was reflecting here Aristotle's repeated concern that the πολιτικός and the νομοθέτης pay attention to the place and the men ("à la nature du pays et de ses habitants"). Aubenque explained in this way what he intended by distributive (*distributif*). He did not explain collective (*collectif*), which presumably means that a predicate is being said of the aggregate of individuals in view—of a heap of sand, say, rather than of each of the grains of sand in the heap, while *distributif* means that the predicate is being said of each of the individuals over which the quantifier ranges—of each grain of sand. In quantificational logic, the quantifier, in this case παντ-, operates on the individuals in the universe one by one rather than in a heap.[2] The introduction of the language of collective and distributive, however, contributed to shaping the subsequent discussion, as will appear below.

In 1990, Pierre Pellegrin adopted Aubenque's argument, criticizing Gauthier and Jolif for not understanding that πανταχοῦ at this point had

> a distributive sense (un sens distributif). Here Aristotle is not alluding to some one "ideal constitution," everywhere the same among all people, which would put him in contradiction with the rest of his political thought and with the setting of the passage itself. He affirms that in each concrete situation

> there is one and only one constitutional form which is excellent. Excellent means that it fits with nature, and more precisely the nature of the human group concerned.
>
> (1990, 2017, 39; my trans.)

Pellegrin rested his argument in part on the understanding that Aristotle viewed the stage of growth or development of the human group concerned as important to determining what πολιτεία would be best for it. As he went on to say, "Every human group is, in effect, the outcome of a history which explains, with other factors, the present state of this group" (1990, 41; my trans.). Since his explanation is consistent with what Aristotle says elsewhere, one would expect his point to be reflected in this sentence. And perhaps it is reflected where Aristotle qualifies the ἀρίστη [πολιτεία] as κατὰ φύσιν—not in the primitivist sense but in the sense of having grown, even to maturity. Aristotle does say in the *Politics*, after all, that when the coming to be is complete (γενέσεως τελεσθείσης), we say this is the φύσις of each (*Pol.* 1252b32–33), giving as examples not only animals but also the institution of the household. Growth is an etymologically sound meaning and an attested one for φύσις (LSJ).[3] In subsequent years, David Keyt (1991), Pierre Aubenque again (1995), Troels Engberg-Pedersen (1995), Aubenque still again, reversing his position (1998), Pierre Destrée (2000), and Mulhern again (2007) contributed to this discussion, perhaps by this time an actual controversy (see Bibliography). These contributions will be addressed in detail elsewhere.

Recently, Pellegrin has restated his position as follows:

> A passage of the *Nicomachean Ethics* has been interpreted badly, even by the best commentators. We read there, "There is just one constitution that is [naturally] everywhere the best" (5, 7, 1135a5). Aristotle does not at all want to say that, notably from the political nature of human beings, there is for all cities one single form of constitution that would be completely natural, the same for all. The "everywhere" has a distributive (*distributif*) sense, and in this passage it means that in each particular case, for a given city at a given moment (*pour une cité donnée à un moment donné*), there is just one constitutional form that is naturally the best, or, to look at the superlative another way that is *excellent*, and this rule is valid everywhere.
>
> (trans. Preus 2020, 183; French supplied from, 204)

There is merit in "pour une cité donnée à un moment donné," especially if, as seems likely from what follows, Pellegrin has in mind the growth or development of a city, as Aristotle sometimes does (*Pol*. 1286b8–22 and 1288a8–15; Mulhern 2021b). This phrase itself would be a suitable, if expanded, rendering for κατὰ φύσιν—literally, in one sense of φύσις, according to growth. Then Aristotle's sentence as a whole might be expressed as "Only one [πολιτεία] is for a given city at a given moment the best" (Arist. *Eth. Nic.* 1135a5).

Where does this précis of the scholarship leave the sense that πολιτεία would have to have if it occurred there? Putting aside the contrast of collective and distributive, which does not enlighten the operation of the quantifier for the reason given above; and disregarding the rendering of δύναμις by *force*, which obscures the more ordinary sense of δύναμις as *potency* or the like in Aristotle; and dropping the primitivist Latinate-influenced interpretation of φύσις as an original state or a state at birth, though of course birth is not the original state for Aristotle, in favor of growth, perhaps with an emphasis on maturity: what remains might be given as, "for every place, there is but one πολιτεία that is best for it at its current stage of development" (1135a5). Here πολιτεία is unlikely to mean the citizenship, since the citizenship is rather that complex and already developed condition, whatever its stage, to which the πολιτεία in another sense must be fitted. And it is unlikely to mean the citizen body—those who share in the citizenship. It is unlikely as well to mean the arrangement of offices, since the same arrangement might be found in cities at different stages of development. With these three eliminated, it appears that the πολιτεία is most likely here to be the regime or πολίτευμα—those who rule.

Book VI (One Occurrence)

In the one occurrence in Book VI, Aristotle is addressing the kinds of practical wisdom, and he recognizes that people seek what is good for themselves and think that they must, and from this opinion comes the view that they are practically wise. Aristotle interjects, though, that "perhaps it is not possible [to seek] one's own wellbeing without household management and πολιτεία" (*Eth. Nic.* 1142a10; my trans.). Although scholars have not paid much attention to this occurrence,[4] it pretty clearly does not mean arrangement of offices, since that is not related to Aristotle's topic here. Nor, apparently, does it mean either citizen body or regime. Aristotle apparently is contrasting two different partnerships—that of the well-functioning household and that of the citizenship, with ruling and being ruled in turn. The sense appears to be citizenship.

Book VIII (Seven Occurrences)

In Book VIII, Aristotle has begun to extend his discussion to φιλία in the city and the household, though his discussion of these institutions is much abbreviated compared to that in the *Politics*. First, he considers the city and so πολιτεῖαι, which he approaches differently here from the way he approaches them in the *Politics*. For one thing, he starts off with the phrase πολιτείας εἴδη (*Eth. Nic.* 1160a31), which, singular and plural together, occurs only seven times in the *Politics*; he will use πολιτείας εἶδος just before the end of this section (*Eth. Nic.* 1160b20–21). Then he gives a classification that differs slightly from the provisional one-few-many scheme of *Politics* III.7—kingship, aristocracy, and timocracy here, kingship, aristocracy, and πολιτεία there. And then he gives the deviations of the three (*Eth. Nic.* VIII.10, 1160a31–1161a9). Sir Alexander Grant observed:

> This chapter, containing a classification of the forms of government and of the perversions to which they are exposed, can hardly have been written after the *Politics* of Aristotle. It has rather the appearance of a first essay, the conclusions of which afterward were worked out in detail, and partly modified.
>
> (1885, 2:269)

What is most striking here is that Aristotle is concerned mainly not with arrangements of offices—Grant's "forms of government"—but with who rules. He speaks of the base king's becoming a tyrant and observes that from an aristocracy comes oligarchy because of the badness of the rulers. The sense in the first two occurrences appears to be regime. In the third, it is not entirely clear, though it may be tempting to think that it corresponds to what he will come to treat as the mixture, since what "most people are accustomed to call the πολιτεία" (πολιτείαν δ' αὐτὴν εἰώθασιν οἱ πλεῖστοι καλεῖν, *Eth. Nic.* 1160a34–35) might be the so-called (καλουμένη) πολιτεία of the *Politics*, as Ross apparently thought.

Later in this discussion, Aristotle is addressing the passage from timocracy to democracy. He had described the timocracy just above (1160a33) as coming from assessments (ἀπὸ τιμημάτων). Here he says that the timocracy wishes to be of many, and all are equal in the assessment—that is, presumably, where assessment prevails, all with the same assessment are equal. And then, immediately before his summary statement, he notes that the πολιτείας εἶδος deviates least of all, presumably in the direction of more extreme democracy (1160b20). Here the sense seems to be the mixture of democracy with oligarchy (cf. *Pol.* 1293b33–34) in the regime, so translating by *form of government* or the like would be inappropriate.

The following occurrence is in the summary statement on the changes from one to the other (*Eth. Nic.* 1160b21). At this point Aristotle is concerned, as often, with those who rule—the bad king, the tyrant, the bad oligarchs. These are not the citizenship, the citizen body, or the arrangement of offices. Here the πολιτεῖαι are the regimes, as in *Republic* VIII. While the arrangements of offices may change in a μεταβολή, they need not for Aristotle; sometimes only those who control them will change—the regime. So, in the *Politics* Aristotle observes that, while sometimes changes come to be with respect to the established arrangement (πρὸς τὴν καθεστηκυῖαν πολιτείαν), sometimes they do not; those who move them choose to have the same institution, but they wish it to be under their control (*Pol.* 1301b10–13). And shortly before, Aristotle, describing what may happen after a change, notes that those who move it may not change abruptly but are satisfied at first to get little things from the others, so that the laws that were there before remain, but those who changed the regime are in charge (1292b18–21). Indeed, it appears that the same or similar institutions or arrangements of offices might be found in regimes as different as democracies and oligarchies.[5]

At the beginning of Aristotle's next conventional chapter he says that φιλία appears appropriate to each of the πολιτεῖαι, as much as the just (*Eth. Nic.* 1161a10). This comparison allows him to compare φιλία in the city with φιλία in the household, beginning with the king, whose φιλία is an excess of benefit to the

kingdom; Aristotle compares to it the φιλία of fathers and forefathers. Here again the focus is on those who rule, and the πολιτεῖαι seem to be the regimes—those who rule.

In the next occurrence, Aristotle is moving from a discussion of φιλία of unequals as individuals to φιλία of unequals as citizens (1163b5). For Aristotle, in the former case, each of the unequals should enjoy more, but not of the same thing—to the superior honor, to the needy gain. Here Aristotle's view of generosity is in play. He goes on to say that it seems to be this way in πολιτεῖαι also. Aristotle goes on immediately to discuss the one who contributes nothing to the κοινόν and so is not honored while the one who does contribute receives honor, which is κοινόν. Thus he seems to have in mind the citizen bodies.

Book X (Five Occurrences)

In Book X, Aristotle is concluding his course of lectures on the things related to character and pointing forward to his next course, which will be on the things related to the citizen. He gives a diatribe against those who presume to teach the things related to the citizen—τὰ πολιτικά (1180b29–30)—but who have no experience with these things (1180b35–1181a1). These things are most of all ruling and being ruled. The suggestion is that he will be doing something quite different from what his predecessors and competitors have done when he gets to the *Politics*; one should expect some discontinuity with the past. He has pointed out that experience is useful to those concerned with the citizens; as Ross renders, "experience contributes not a little; else they could not have become politicians by familiarity with politics; and so, it seems that those who aim at knowing about the art of politics need experience as well" (1181a9–12, trans. Ross 1954, 274). Here, Aristotle mentions his collections of νόμοι and πολιτεῖαι (1181b7), observing that they might be useful to those who can look and judge what will be noble and the contrary and what sort fit with what sort [of citizens]. Both the νόμοι and the πολιτεῖαι must fit with the citizens, so the πολιτεῖαι cannot themselves be the citizen bodies here. Nor are they likely to be the regimes, which are drawn from the citizens. Constitutions in the sense of arrangements of offices also is unlikely, since very different cities had similar arrangements of offices, as noted above and as Aristotle was aware. Thus, the most likely candidate would be the citizenships themselves—the complex conditions which did differ a good deal from city to city.

At the next occurrence, Aristotle is making a remark about the method he will follow in the upcoming course—ἐπισκέψασθαι μᾶλλον βέλτιον ἴσως, καὶ ὅλως δὴ περὶ πολιτείας (1181b14), after having noted that legislation has been left out of account by his predecessors (1181b12–13). He hardly can fail to have both the *Republic* and the *Laws* in his sights. Schütrumpf has argued that Aristotle is relying on the method of the *Phaedrus* here rather than on the political dialogues to ensure the completeness of his account of constitutions (1989, 212). Aristotle may have in mind even more than that—not just constitutions or arrangements of offices but the other things that πολιτεία means, all of which are intended in the

Politics, and perhaps something even more radical. As will be clear in *Politics* III, Aristotle's own starting point in defining the πολιτεία is the πολίτης; and the title of his work departs from the tradition of Critias and Xenophon and Plato in speaking of the subject in a new way—the things connected with the citizen or πολιτικά. Thus, in his description of his program for the *Politics*, the sense of πολιτεία is not explicit, since Aristotle is looking ahead to using the word in its different historical senses. His use continues to be inexplicit for the same reason (*Eth. Nic.* 1181b17, 19, 21). And so the treatment of πολιτεία in the *Nicomachean Ethics* comes to an end.

Epilogue

The *Nicomachean Ethics*, even as the *Politics*, shows a range of senses for πολιτεία where Aristotle is explicit, while in some cases, at the end, he uses it inexplicitly to allow for the range of senses that it will have in the *Politics*. The most likely sense is able to be determined in some cases from the context in which Aristotle uses an idiom or otherwise indicates the subject of his discussion. Where he uses the language of sharing, the sense is most likely to be citizenship; where he speaks of being habituated, the sense is most likely to be citizen body; when he is discussing those who rule, whether kings or oligarchs or others, the sense is most likely to be regime. Besides these distinct senses, which are represented in both earlier and later writers, he has some special uses, as in the case of the so-called or καλουμένη πολιτεία—the mixture of democracy and oligarchy. Πολιτεία does not seem to be used in the sense of constitution (arrangement of offices) in the *Nicomachean Ethics*. Where πολιτεία does not actually occur but has been understood by many scholars to be intended and to mean constitution (*Eth. Nic.* 1135a5), the sense of the line appears to be that, for every place (πανταχοῦ), there is only one [πολιτεία, regime] that is best for it at its stage of development or growth (κατὰ φύσιν).

Notes

1 Here and below, italics instead of single quotes indicate that an expression is being mentioned rather than used.
2 On the question of individuals bound by quantifiers in Aristotle, see Patzig (1968, 37–38). For a short survey of attempts to use modern logical techniques to understand ancient logic, see Mulhern (1974).
3 For a discussion of φύσις in related contexts, see Mulhern (2021a).
4 See on the passage, however, Greenwood (1909, 193–194).
5 Ostwald points out: "Now, while these three institutions [sortition of magistrates, accountability of the magistrates, and public deliberation of all matters of public policy] express the principles of political equality, they are embodied in but not identical with democracy. It is a fact, and Herodotus was no doubt aware of it, that these three institutions could, in a different measure, also be found in non-democratic forms of government. We hear of sortition being used in some oligarchies, and in Sparta, which was not regarded as a democratic state in antiquity, some form of εὔθυνα is known to have existed and, as two recent studies have shown, many matters of public policy were decided not only in the Gerousia but also in the Assembly" (1969, 112).

Bibliography

Aubenque, Pierre. 1980. “La loi selon Aristote.” *Archives de philosophie du droit* 25: 147–57.

———. 1995. “The Twofold Natural Foundation of Justice According to Aristotle.” In Heinaman 1995, 35–47.

———. 1998. “Aristote était-il communautariste?” In *En torno a Aristoteles: Homenage al Profesor Pierre Aubenque*, edited by Ángel Álvarez Gómez and Rafael Martínez Castro, 31–43. Santiago de Campostela: University Press of Santiago de Campostela.

Bonitz, Hermann. 1870. *Index Aristotelicus*. Berlin: Walter de Gruyter.

Bywater, I., ed. 1894. *Aristotelis ethica Nicomachea*. Oxford: Clarendon Press. Thesaurus Linguae Graecae Digital Library, edited by Maria C. Pantelia. Accessed March 7, 2022. http://www.tlg.uci.edu.

Cunliffe, Richard John. 1924. *A Lexicon of the Homeric Dialect*. London: Blackie and Son.

Destrée, Pierre. 2000. “Aristote et la question du droit naturel (*Eth. Nic.*, V 10, 1134b18-1135a5).” *Phronesis* 45, no. 3: 220–39.

Duplouy, Alain and Roger Brock. 2018. *Defining Citizenship in Ancient Greece*. Oxford: Oxford University Press.

Engberg-Pedersen, Troels. 1995. “Justice at a Distance: Less Foundational, More Naturalistic: A Reply to Pierre Aubenque.” In Heinaman 1995, 48–60.

Gauthier, René Antoine and Jean-Yves Jolif. 1958–1959. *L’Éthique à Nicomaque*. 3 vols. Louvain: Publications Universitaires de Louvain and Paris: Éditions Béatrice-Nauwelaerts.

Grant, Sir Alexander. 1885. *The Ethics of Aristotle*. 2 vols. London: Longmans, Green.

Greenwood, L. H. G. 1909. *Aristotle Nicomachean Ethics Book Six*. Cambridge: Cambridge University Press.

Hardie, W. F. R. 1968. *Aristotle’s Ethical Theory*. Oxford: Clarendon Press.

Heinaman, Robert ed. 1995. *Aristotle and Moral Realism*. London: UCL Press.

Joachim, H. H. 1962. *The Nicomachean Ethics*. Oxford: Clarendon Press.

Keyt, David. 1991. “Aristotle’s Theory of Distributive Justice.” In *A Companion to Aristotle’s Politics*, edited by David Keyt and Fred D. Miller, Jr., 238–78. Oxford: Blackwell.

Mulhern, J. J. 1972. “ΜΙΑ ΜΟΝΟΝ ΠΑΝΤΑΧΟΥ ΚΑΤΑ ΦΥΣΙΝ Η ΑΡΙΣΤΗ (*EN* 1135a5).” *Phronesis* 17: 260–68.

———. 1974. “Modern Notations and Ancient Logic.” In *Ancient Logic and Its Modern Interpretations*, edited by J. Corcoran, 71–82. Dordrecht: D. Reidel.

———. 2007. “The *Aristē Politeia* and Aristotle’s Intended Audience in the *Politica*.” *Polis* 24: 284–97.

———. 2015. “Πολιτεία in Greek Literature, Inscriptions, and in Aristotle’s *Politics*: Reflections on Translation and Interpretation.” In *Aristotle’s Politics: A Critical Guide*, edited by Thornton Lockwood and Thanassis Samaras, 84–102. Cambridge: Cambridge University Press.

———. 2021a. “Φύσις in Aristotle’s *Politics*.” Paper presented at the Annual Meeting of the American Philosophical Association, Central Division, Society for Ancient Greek Philosophy Panel, New Orleans, February, 2021. (Available in *Society for Ancient Greek Philosophy Newsletter* 2020/1, no. 2: 29–37).

———. 2021b. "Aristotle on City Development and the Best Regimes in *Politics* III and VII." Paper presented at the Annual Meeting of the Northeastern Political Science Association, Boston, November, 2021.

Ostwald, Martin. 1962. *Aristotle, Nicomachean Ethics*. Indianapolis: Bobbs-Merrill.

———. 1969. *Nomos and the Beginnings of the Athenian Democracy*. Oxford: Clarendon Press.

Patzig, Günther. 1968. *Aristotle's Theory of the Syllogism*. Translated by Jonathan Barnes. Dordrecht: D. Reidel.

Pellegrin, Pierre. 1990. *Les Politiques*. Paris: Flammarion.

———. 2017. *L'Excellence menacée: Sur la philosophie politique d' Aristote*. Paris: Classiques Garnier.

———. 2020. *Endangered Excellence: On the Political Philosophy of Aristotle*. Translated by Anthony Preus. Albany: SUNY Press.

Ross, Sir David. 1954. *The Nicomachean Ethics of Aristotle*. World's Classics. London: Oxford University Press.

———. 1957. *Aristotelis Politica*. Oxford: Clarendon Press. Thesaurus Linguae Graecae Digital Library, edited by Maria C. Pantelia. Accessed March 7, 2022. http://www.tlg.uci.edu.

Schütrumpf, Eckart. 1989. "Platonic Methodology in the Program of Aristotle's Political Philosophy: *Politics* IV.1." *Transactions of the American Philological Association* 119: 209–20.

Smyth, Herbert Weir. 1956. *Greek Grammar*. Revised by Gordon M. Messing. Cambridge: Harvard University Press.

15 Assertoric Truth and Falsehood in the *Categories**

Mark R. Wheeler

Introduction: *Categories* 12 14b11–23

A passage from *Categories* 12 (14b14–23), is, I think, the most important passage about truth and falsehood in any of Aristotle's works other than the *Metaphysics*, and I will argue here that the view expressed by Aristotle in this section of *Categories* conforms to, and is best understood in terms of, the theory of truth he develops in the *Metaphysics*. As I have elaborated elsewhere my interpretation of Aristotle's theory of truth in the *Metaphysics* (Wheeler 2019), and as I have not yet discussed in detail this passage in the *Categories*, the bulk of the interpretive work here will focus on the latter passage.[1]

Of passages outside the *Metaphysics*, the following are crucial for an understanding of Aristotle's account of truth and falsehood:

- *Categories*: 2a4–10, 4a23–b10, 13a37–b35, 14b14–23;
- *De Interpretatione*: 16a9–19, 16a32–b5, 16b26–17a7, 17a38–18a7, 18a12–27, 18a28–19b4, 21b18–19, 23a27–24b9;
- *Analytics*: 47a8–9, 52a24–38, 53b4–57b17, 64b9–10, 81b18–29;
- *Topics*: 111a14–20, 139a37–b3, 149b4–9, 157b26–31, 160a24–28;
- *Sophistical Refutations*: 178b24–9;

* It is a pleasure to offer this paper in honor of my dear colleague Professor Anthony Preus. Tony has been extraordinarily helpful to me throughout my academic career, as he has been for many others. For example, while still in graduate school, I delivered my first professional paper at a session for the Society for Ancient Greek Philosophy (SAGP) at the Eastern APA on a snowy night in Boston. Tony, of course, had organized the session. Professor Sarah Broadie (one of the scholars I admired most) also presented a paper in that session, and most if not all of the people in the audience, other than my parents, were there for her paper. Still, I was thrilled to be part of the session. And months before that snowy night in Boston, Tony had sent me a letter to let me know my paper had been accepted for the SAGP session, and had enclosed for my review the reader's comments, provided by Father Joseph Owens, another scholar I admired greatly. I have those comments still. In doing all this, Tony gave hope to a young and aspiring student of ancient philosophy. I could give other examples of how Tony has been helpful to me in particular, but I am not an exceptional case—many of us have benefitted from Tony's kindness and his dedication to the field. He is a beloved colleague.

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- *De Anima*: 427b8–20, 428a11–18, 428b2–17, 428b10–429a2, 430a26–b6, 430b26–30, 431b10–18, 432a10–14;
- *Nicomachean Ethics*: 1111b31–4, 1124b6, 1127b2, 1139b15–18, 1141a3–8, 1142b10–11;
- *Rhetoric*: 1355a14–19.2.

Arguably, none of these passages involve definitions of truth and falsehood, but if any does, then the passage from *Categories* is the one (14b14–23).

All of Aristotle's remarks about truth (ἡ ἀλήθεια) and falsehood (τὸ ψεῦδος) have to do with semantic (or semiotic) relationships among linguistic assertions, mental assertions, and the things in the world.[2] Introducing all of the most important questions we must answer about these relationships, Aristotle writes:

> For there being a man reciprocates as to implication of existence with the true λόγος about it: if there is a man, the λόγος whereby we say that there is a man is true, and reciprocally—since if the λόγος whereby we say that there is a man is true, there is a man. And whereas the true λόγος is in no way the cause of the actual thing's existence, the actual thing does seem in some way the cause of the λόγος being true; it is because the actual thing exists or does not that the λόγος is called true or false.
>
> (*Cat.* 14b14–23; my translation following Ackrill 1963)[3]

It is clear from the passage that at least some λόγοι are either true or false. But does Aristotle think that every kind of λόγοι can be either true or false? If not, which kinds of λόγοι can be? Can anything other than λόγοι be true or false? Second, one of the principal claims made in the passage is that πραγμάτα (things in the world) "reciprocate as to implication of being" with the true λόγοι made about them. How are we to understand this claim? How do things in the world (πραγμάτα) reciprocate with respect to being in relation to true λόγοι? More generally, how does Aristotle explain the correlation between things in the world (πραγμάτα) and true and false λόγοι?

Single Simple Linguistic Assertions

At the beginning of both the *Categories* and *De Interpretatione*, Aristotle distinguishes between things said with combination and things said without combination in order to differentiate between what can be true or false and what cannot. He repeatedly asserts in these works that only things said with combination can be true or false. Near the beginning of the *Categories*, Aristotle introduces the basic distinction between things said with and without combination:

> Of things that are said (Τῶν λεγομένων), some are said with combination (τὰ μὲν κατὰ συμπλοκὴν λέγεται) while others are said without combination

> (ἄνευ συμπλοκῆς). Examples of those involving combination are: 'man runs', 'man wins'; and of those without combination: 'man', 'ox', 'runs', and 'wins'.
> (1a16–19; my interpolations)

It seems from the contrast between this distinction and the ontological distinctions made that the things said without and without combination are linguistic entities as opposed to non-linguistic πραγμάτα (1a20–b9). Aristotle goes on to claim:

> Of things said without any combination, each signifies either substance or quantity or qualification or a relative or where or when or being-in-a-position or having or doing or being affected. To give a rough idea, examples of substance are man, horse; of quantity: four-foot, five-foot; of qualification: white, grammatical; of a relative: double, half, larger; of where: in the Lyceum, in the market place; of when: yesterday, last year; of being-in-a-position: is-lying, is-sitting; of having: has-shoes-on, has-armour-on; of doing: cutting, burning; of being-affected: being-cut, being-burned. None of the above is said just by itself in any affirmation, but by the combination of these with one another an affirmation is produced. For every affirmation, it seems, is either true or false; but of things said without any combination none is either true or false (e.g., 'man', 'white', 'runs', 'wins').
> (1b25–2a10)

Here the important claims are:

1. Things said without any combination signify either substance or quantity or qualification or a relative or where or when or being-in-a-position or having or doing or being affected. It is reasonable to believe that Aristotle is describing a class of linguistic units that signify items in the categories but do not constitute affirmations unless combined with others of the same class.[4] It follows that, since the λόγοι are true or false (14b14–23), they involve some sort of combination.
2. Nothing said without any combination is either true or false.
3. Nothing said without any combination is an affirmation. It is suggested in 3 and 2 that the true-or-false λόγοι may be generated by combining things said without any combination and may be affirmations. The type of combination Aristotle has in mind here is left open, although it seems clear from the context that he is referring to a type of linguistic combination.[5] It becomes clear that the kind of combination Aristotle is concerned with here produces linguistic assertions, but he does not elaborate.[6]
4. Affirmations are generated by combining things said without any combination. It does not follow from this that only affirmations are either true or false. It may be that there are other kinds of truth bearers.[7] Only if affirmations are the only things said with the relevant sort of combination will they be uniquely true or false.
5. Every affirmation appears to be either true or false.

In *De Interpretatione*, Aristotle uses the distinction between things said without any combination and things said with combination to make similar points about what can be true or false:

> For falsity and truth have to do with combination and separation. Thus names and verbs by themselves—for instance 'man' or 'white' when nothing further is added—are like the thoughts (νοήματι) that are without combination and separation; for so far they are neither true nor false. A sign of this is that even 'goat-stag' signifies something but not, as yet, anything true or false—unless 'is' or 'is not' is added (either simply or with reference to time).
>
> (*Int.* 16a12–18)

This is a fundamentally important passage, both in itself and insofar as it helps us to better understand the true-or-false λόγοι of the *Categories* passage. In the immediately preceding lines, Aristotle had sketched his general account of signification.[8] He now discusses truth and falsehood: truth and falsehood have to do with combination and separation. All names and verbs said without any combination or separation are neither true nor false. A name does not signify anything true or false unless a verb is added to it. Indeed, Aristotle asserts that "nothing, in fact, that is said without combination is either true or false" (*Cat.* 13b10–11).

It seems clear, then, that things said without any combination or separation are neither true nor false. Only things said with some sort of combination or separation are true or false. But not just anything said with any sort of combination or separation can be true or false. What sort of combination or separation are relevant?

According to Aristotle, all and only the things said with some sort of linguistic combination are λόγοι (*Int.* 16b26–8). So, those *things said with combination or separation* that are either true or false are λόγοι. It is clear already that at least some λόγοι are true or false (*Cat.* 14b11–23), but not all λόγοι are either true or false. Aristotle is quite explicit about this, noting that prayers are λόγοι that are neither true nor false (*Int.* 17a3). Nor are definitions—another kind of λόγος — true or false unless they are combined with a verb of some sort, as Aristotle also clarifies (17a11–12). In *De Interpretatione*, Aristotle is not concerned with λόγοι that are neither true nor false, referring his audience to the study of rhetoric and poetry for more about λόγοι that are neither true nor false (17a5–6).

That not all λόγοι are either true or false is obvious if we consider Aristotle's conception of a λόγος. A λόγος is a significant spoken sound that can be analyzed into syllabic parts, at least one of which is a significant spoken sound significant in separation (cf. *Int*. 16b33–17a2). Here by *significant in separation* Aristotle intends to convey the idea that a λόγος involves at least one part that is itself a significant spoken sound and that this part signifies in its own right as part of the λόγος. Thus, for example, *oppressed person* is a λόγος in which both *oppressed* and *person* are significant spoken sounds and both signify in their own right in the sense that the signification of *oppressed* and the signification of *person* directly and independently inform the signification of the λόγος *oppressed person*. This is to

be contrasted with the words *animal* and *mice*, in which none of the parts function as significant spoken sounds, and also with double words like *cockroach* in which both *cock* and *roach* have some semantic force (at least they do, or did, for some etymologists and entomologists—*cock* having been chosen, apparently, because the insect was somehow associated with roosters and *roach* because the bug was somehow thought to be similar to a kind of Eurasian minnow) although neither *cock* nor *roach* are significant in their own right in *cockroach*.

In *De Interpretatione*, Aristotle defines a linguistic assertion (ὁ ἀποφαντικός) as a λόγος that can be true or false, and notes that only those λόγοι that are linguistic assertions can be true or false (17a2–3; cf. 16b26–27).[9] Throughout the *Organon* Aristotle is committed to this claim.[10] Aristotle differentiates between two kinds of linguistic assertion—affirmation (κατάφασις) and negation (ἀπόφασις; 17a8-9). Aristotle distinguishes between simple statements (ἡ ἁπλῆ ἀπόφανσις) and composite statements (ὁ λόγος σύνθετος) composed of simple statements conjoined by a connective (cf. 17a20–22). A composite statement is a statement comprised of simple statements conjoined by connectives. Every simple assertion is either an affirmation or a negation.

Aristotle claims that every linguistic assertion must contain a verb (17a9–10). Given Aristotle's conception of a verb, this entails that every linguistic assertion must also contain a name. Thus, every linguistic assertion involves at least one name and one verb as significant parts. Simple assertions are truth-bearers, syntactically constituted by a subject term and a predicate term, signifying that one thing either belongs to or does not belong to another thing. According to Aristotle, every simple statement is either an affirmation or a negation (cf. 17a8–9 and 17a20–22). An affirmation is a simple statement that something belongs to something at some time (cf. 17a25). Every affirmation, on Aristotle's account, has a name[11] and a verb (cf. 19b5–6 and 19b10–12) for syntactic parts. Thus, for example, the statement *Socrates talks* has the name *Socrates* and the verb *talks* for syntactic parts and state that what is signified by *talks* belongs in the present time to what is signified by *Socrates*. *Socrates talks* is, thus, an affirmation. A negation[12] is a simple statement that something does not belong to something at some time (cf. 17a26). As in the case of affirmations, a negation must have a name[13] and a verb as syntactic parts, but a negation additionally has a symbol for negation as a syntactic part. In what follows, I shall only be interested in affirmations and negations.

A single simple affirmation asserts only that one thing belongs (ὑπάρξει) to another at some time, and a single simple negation asserts only that one thing does not belong to another at some time. Examples of simple linguistic assertions provided by Aristotle are *every man is white*, *a man is white*, and *some man is white* (where it is assumed that both *every man*, *a man*, and *white* signify only one thing) (18a14–17). The ordinary language syntax of these affirmations can be logically transformed into Aristotle's technical syntax for simple statements. Thus, for an example, the ordinary locution *every man is white* can be transformed into the more technical (although, for Aristotle, logically equivalent) locution *white belongs to all of man*.

Aristotle explicates his criteria for being a single affirmation and for the oneness of things in chapters 8 and 11 of *De Interpretatione*. The focus of Aristotle's

attention differs in the two chapters. His claims in chapter 8 concern linguistic assertions that fail to be single in virtue of having as a syntactic part one name which signifies more than one thing. The material in chapter 11 concerns syntactic parts of linguistic assertions that are either subject phrases or verb phrases and not exclusively on names and verbs. In chapter 11, Aristotle focuses on linguistic assertions that fail to be single in virtue of having a subject term or a predicate term which signifies more than one thing, and he provides criteria for determining whether or not a given term signifies one thing.

An affirmation is single (μία) just in case it signifies one thing belonging to one thing (cf. 18a12–3), and Aristotle asserts that, properly speaking, every affirmation signifies one thing belonging to one thing (cf. chapter 10). Examples of the different kinds of affirmations provided by Aristotle are *every man is white*, *a man is white*, and *some man is white* (where it is assumed that both *every man*, *a man*, and *white* signify only one thing) (18a14–17).[14]

In chapter 7, Aristotle distinguishes between two basic kinds of single simple assertion, those that are about universals and those that are about particulars (17b1–3), and then he differentiates between two different ways of asserting that something belongs to a universal (17b3–10). According to Aristotle, one can assert that something belongs to a universal insofar as it is a universal or that something belongs to a universal not insofar as it is a universal. Thus, a single simple assertion can be either an assertion about a particular, an assertion about a universal insofar as it is a universal, or an assertion about a universal not insofar as it is a universal.

Given Aristotle's explications of his technical notions *that which is asserted of some universal insofar as it is a universal* and *that which is not asserted of a universal insofar as it is a universal* we can infer that we can make assertions about universals in two ways: either insofar as they are universals or not insofar as they are not universals but, rather, insofar as they are some other sort of thing. What might this other sort of thing be? Given Aristotle's ontology, and given the sense of the passages we are discussing in *De Interpretatione*, we have but one choice: the other sort of thing must be a particular. Therefore, the thrust of Aristotle's semantic distinction here has to do with making assertions about a universal insofar as it is a universal (and *not* a particular) and with making assertions about a universal insofar as it is a particular (and *not* a universal).

When Aristotle claims that one name is given to two things, I take him to mean that a name signifies by convention more than one thing. In his example, Aristotle claims that *cloak* signifies both man and horse (18a18–27). Here, Aristotle is talking about the real entities signified by the name *cloak* and not affections of the soul, and Aristotle usually discusses homonymy in terms of the real entities secondarily signified by spoken sounds. That Aristotle here discusses the real entities signified by spoken sounds does not undermine the claim that spoken sounds primarily signify affections of the soul, and the discussion in *De Interpretatione* 8 can be reformulated in terms of primary significance. Thus, assuming that *horse* primarily signifies the concept of a horse, *man* primarily signifies the concept of man, and *white* signifies only one concept, Aristotle claims that the statement *the*

cloak is white can be analyzed into the logically equivalent compound statement *the horse is white and the man is white*. Although the name *cloak* is one spoken sound, the semantic content of the name is twofold. In claiming that *cloak is white*, therefore, what is primarily signified by *white* is stated to belong to both the concept of man and the concept of horse, since *cloak* primarily signifies both of these things. Since it is assumed that the concept of man and the concept of horse do not make up one concept, if the concept of white belongs to both the concept of horse and the concept of man, then the concept of white belongs to two distinct concepts and not one concept. Thus, the statement is not single because it does not state that one thing belongs to one thing.

These considerations license the following assumption: If (1) *A* is a term and (2) there is a *y* and a *z* such that (a) *A* signifies *y*, (b) *A* signifies *z*, and (c) it is not the case that *y* and *z* make up one thing, then it is not the case there is a statement *s* such that *A* is a syntactic part of *s* and *s* is a single statement. Aristotle explicitly denies that the kind of oneness he is interested in is a function of language (20b15–16). Further, Aristotle elaborates upon the claims made in *De Interpretatione* 8 and makes it clear that the oneness he is concerned with is not the oneness of a linguistic entity (20b12–15). Thus, the fact that the name *Bob* has been given to both man, walking, and white does make them one thing. The oneness of things is independent of the language we use to signify them.

Aristotle claims that if one thing is affirmed of many things and if the many things do not make up one thing, then there is more than one affirmation (cf. 20b12–22). Thus, following his example (20b18–22), assume that *white*, *man*, *walking*, and *good* each signify only one thing. Moreover, assume that white, man, and walking do not make up some one thing. The statement *the walking white man is good* affirms one thing of many things, and the many things do not make up some one thing. Thus, according to Aristotle, the statement is one spoken sound, but more than one affirmation is expressed in the statement. Similarly, if many things are affirmed of one thing and the many things do not make up some one thing, there will be more than one affirmation.

To highlight this fact, it is worth noting that Aristotle's claims in *De Interpretatione* 8 and 11 imply that the subject term of a single affirmation may be a name signifying only one thing or a phrase having many names for syntactic parts which, when taken together, signify only one thing (cf. 20b12–22).[15] For example, the statement *A bipedal rational animal is just* is a single statement, according to Aristotle, because the predicate term *just* signifies only one thing and the subject term *a bipedal rational animal*, while having three names for its syntactic parts, signifies only one thing, *viz*. a man.

Single Simple Mental Assertions

The preceding section shows that the λόγοι that can be true and false in the context of *Categories* (14b14–23) are single simple linguistic assertions, either affirmations or negations. Early in the *Categories*, Aristotle offers us further information about the kinds of λόγοι that can be true and false, and he

commits himself to the claim that mental assertions can be true and false. The passage reads as follows:

> But perhaps someone might object and say that λόγοι and beliefs are like this [i.e., numerically one and the same statement or belief is able to receive contraries (cf. 4a10f.)]. For the same λόγοι seem to be both true and false. Suppose for example, that the λόγος that somebody is sitting is true; after he has got up this same statement will be false. Similarly with beliefs. Suppose you believe truly that somebody is sitting; after he has got up you will believe falsely if you hold the same belief about him. However, even if we were to grant this, there is still a difference in the way contraries are received. For in the case of substances it is by themselves changing that they are able to receive contraries. For what has become cold instead of hot, or dark instead of pale, or good instead of bad, has changed (has altered); similarly in other cases too it is by undergoing change that each thing is able to receive contraries. Statements and beliefs, on the other hand, themselves remain completely unchangeable in every way; it is because the actual thing changes that the contrary comes to belong to them. For the statement that somebody is sitting remains the same; it is because of a change in the actual thing that it comes to be true at one time and false at another. Similarly with beliefs. Hence at least the way in which it is able to receive contraries—through a change in itself—would be distinctive of substance, even if we were to grant that beliefs and statements are able to receive contraries. However, this is not true. For it is not because they themselves receive anything that statements and beliefs are said to be able to receive contraries, but because of what has happened to something else. For it is because the actual thing exists or does not exist that the statement is said to be true or false, not because it is able itself to receive contraries. No statement, in fact, or belief is changed at all by anything. So, since nothing happens in them, they are not able to receive contraries.
>
> (4a23–b13)

The argument in the passage contains many important claims: first, at least some λόγοι are either true or false. This claim reinforces the idea that λόγοι can be true or false (14b14–23). It appears that numerically one and the same λόγοι can be true at one time and false at another. Second, at least some beliefs are either true or false. This claim makes it clear that at least some mental entities—beliefs—can be true or false. Third, it appears that numerically one and the same belief can be true at one time and false at another. Fourth, λόγοι and beliefs are different kinds of things. Fifth, truth and falsehood are contraries. Sixth, λόγοι and beliefs are either true or false just in case what they are about either is or is not. This claim establishes the material equivalence of claims that λόγοι and beliefs are true or false with claims as to whether what those λόγοι or beliefs are about does or does not obtain. We will return in a moment to this familiar sounding biconditional. And seventh, if λόγοι and beliefs change truth values, then it is not because they

themselves change. Λόγοι and beliefs are able to receive contraries only if, in so doing, they change in themselves. Nothing can happen to numerically one and the same λόγος or belief. Hence, numerically one and the same λόγος or belief is not able to receive contraries and, hence, is not able to be true at one time and false at another.

Unlike substances, which change from one contrary to another because of a change in themselves, if λόγοι and beliefs change from truth to falsehood, and vice versa, they do so because of a change in something other than themselves: if λόγοι and beliefs change from truth to falsehood or from falsehood to truth, it is because the things they are about change. The λόγος or belief that Socrates is sitting is true when Socrates is sitting, and if it can change truth value, it becomes false when Socrates is sitting no longer.

Taking another look the passage from *De Interpretatione* (*Int.* 16a12–18), recall that Aristotle claims that some thoughts (νόημη) in the psyche and some of what is expressed in spoken sounds are without truth and falsehood. He does not specify which thoughts. It is not the spoken sounds themselves but what is *in them*—the names, verbs, and sentences—that seems to be of concern. To some thoughts in the psyche, and to some of what is expressed in spoken sounds, truth or falsehood belong necessarily. He does not explain this claim (in particular, the claim of necessity) in this passage. Truth and falsehood have to do with combination and separation. So, the thoughts and spoken sounds that are true and false have to do with combination and separation. More precisely, they involve the combination or separation of thoughts or some sorts of significant spoken sounds. Some thoughts in the psyche are without combination or separation. All thoughts without combination or separation are neither true nor false. He doesn't tell us which. Some of what is expressed in spoken sounds is without combination or separation. All names and verbs uttered without combination or separation are neither true nor false. He makes it clear that names and verbs are the significant spoken sounds he has in mind. Even non-referring names signify something. Non-referring names do not signify anything true or false unless they are combined with, or separated from, a verb. This example is important for the interpretation of Aristotle's account of non-referring names, but it is also helpful as an example of what kind of linguistic combination and separation he has in mind in the passage.

At *De Interpretatione* 14 (23a27–24b9), Aristotle illuminates the doxastic dimension of his account of truth. It is evident that Aristotle is committed to the semantical priority of mental assertions over their corresponding linguistic assertions. Within this chapter, Aristotle makes conditional assumptions which, I take it, are his actual claims (23a22–37). First, with regard to their semantical properties, spoken sounds follow things in the mind. Obviously, significant spoken sounds do not follow things in the mind in all ways. In this context, Aristotle is clearly concerned with the semantical properties of beliefs and statements. He then applies this assumption to the problem of identifying the contrary opposite for a given belief or statement. His specific example is in the form of an argument: the belief that everyone is just is contrary to the belief that everyone is unjust

(23a31–32). If in the case of beliefs the belief about the contrary is the contrary belief, then the same necessarily holds in the case of statements. If in the case of beliefs the belief about the contrary is not the contrary belief, then the same necessarily holds in the case of statements.[16] Thus, what holds of beliefs with regard to contrariety necessarily holds similarly for what is asserted in spoken sounds.

Another passage from *De Interpretatione* 14 lends explicit support to the claim that Aristotle uses the terms κατάφασιν and ἀπόφασιν to refer to both what is asserted in the psyche and what is asserted in spoken sounds (24a3–24b1). And in the sequel, again Aristotle makes conditional claims that I assume he accepts: the assertions and negations in spoken sounds are symbols of the assertions and negations in the psyche, and what is true about contraries in the case of beliefs is true about contraries in the case of spoken affirmations and negations (24b1–9).[17]

That both spoken sounds and thoughts involving combination are true or false should not be surprising, given that Aristotle makes it clear that all significant spoken sounds signify (at least primarily) affections in the psyche (16a3–8). That they should be exactly similar to the things in the world that make them true needs explanation.

Given that all statements are significant spoken sounds and that all significant spoken sounds primarily signify some affection of the psyche, one cannot reasonably doubt that Aristotle posited an affection of the psyche for every linguistic assertion. However, one might doubt that Aristotle assumed a correspondence between the relations obtaining between or among significant spoken sounds and the affections of the soul which are primarily signified by significant spoken sounds. One might argue that a linguistic assertion asserting that some real entity belongs to another real entity does not imply that there is a relation of belonging between any affections of the soul.

In *De Interpretatione* 14, Aristotle attempts to determine whether or not the affirmation is contrary to the negation. In order to determine this, Aristotle focuses his attention on which beliefs are contraries. He determines the relation of contrariety between beliefs, and then infers from this the relation of contrariety between uttered assertions. Aristotle's explicit justification for the inference from the doxastic relation of contrariety to the corresponding linguistic relation is the following general principle cryptically asserted:

> If, on the one hand, the spoken sounds follow the thoughts and, on the other hand, it is the belief of the contrary which is contrary (e.g. the belief that every just man is just is contrary to the belief 'every man is unjust'), the same must hold also of spoken affirmations.
>
> (23a32–35)

The general structure of Aristotle's argument in chapter 14 follows the basic pattern of argument outlined in this passage. In drawing his conclusions, Aristotle clearly assumes that the relations holding between and among thoughts correspond to relations holding between and among uttered linguistic assertions. Aristotle indicates that his conclusions in chapter 14 depend upon the assumed

correspondence between spoken sounds and thoughts. In closing, he restates the nature of his preceding arguments as follows:

> If then this is how it is with beliefs, and spoken affirmations and negations are symbols of things in the soul, clearly it is the universal negation about the same thing that is *contrary* to an affirmation.
>
> (24b1–4)

Aristotle notes that his arguments depend upon the assumption that spoken affirmations and negations are symbols of assertions in the psyche (24b1–2). This is the same assumption Aristotle explicitly endorses earlier in *De Interpretatione* (16a3–8). Thus, I take it that Aristotle endorses the claim that significant spoken sounds "follow" the thoughts in the psyche (23a32–33). Moreover, all of Aristotle's arguments in *De Interpretatione* 14 concerning contrariety rely on our taking the latter claim (23a32–33) to imply that the relations between and among thoughts correspond to the relations between and among the spoken sounds which signify those thoughts. Since thoughts are among the affections of the psyche, Aristotle assumes here that there is a symmetry between the relations obtaining between and among mental assertions and those obtaining between and among their corresponding linguistic assertions.

At both *Categories* 5 (*Cat.* 4a21–b13) and *De Interpretatione* 1 (*Int.* 16a9–18), Aristotle treats mental assertions and linguistic assertions as analogous when discussing the properties of truth and falsity. In both of the *Analytica*, Aristotle does not hesitate to describe deductions and demonstrations in terms of either linguistic assertions or mental assertions.[18] Given Aristotle's explicit espousal of the principle in *De Interpretatione*, the most reasonable hypothesis for Aristotle's approach in these other works is that, again, he is assuming that the relations between and among linguistic assertions correspond to those between and among the mental assertions signified by those linguistic assertions.

The above considerations might suggest the following principle: every inferential relation between or among linguistic assertions corresponds to an inferential relation between or among mental assertions and *vice versa*. The latter part of this principle implies that, for every mental assertion, there is a corresponding linguistic assertion. Although Aristotle does claim that every significant spoken sound primarily signifies some affection of the soul, he nowhere claims that every affection of the soul has a corresponding significant spoken sound. Thus, Aristotle apparently leaves it open that there could be affections of the soul and, in particular, inferential relations between or among these which do not correspond to any significant spoken sound or to any inferential relations between or among these. The fact that Aristotle argues from the relation of contrariety between mental assertions to the relation of contrariety between linguistic assertions can be explained by the fact that there are contrary assertions and the assumption that every inferential relation between linguistic assertions signifies a corresponding inferential relation between mental assertions. Thus, I reject the principle stated at the head of this paragraph.

It might be argued, however, that the textual arguments only support the claim that for every relation between linguistic assertions and the parts of linguistic assertions there is a corresponding relation between the affections of the psyche primarily signified by those linguistic assertions, and that my arguments do not support the stronger claim that every relation between any kind of significant spoken sound primarily signifies a corresponding relation between the affections of the soul primarily signified by those significant spoken sounds. In response to this, I note that Aristotle speaks quite generally about significant spoken sounds and affections of the soul in *De Interpretatione* and, again, quite generally about significant spoken sounds and thoughts (16a3–8, 23a32–35, respectively). Thus, every linguistic assertion primarily signifies an affection of the soul the structure of which corresponds to the syntactic structure of its corresponding linguistic assertion, and every universal linguistic assertion involves as a syntactic part a universal term taken as a universal term that primarily signifies a universal concept.

Truth, Falsehood, and Acts of Measurement

To summarize, then, when in the *Categories* Aristotle talks about true λόγοι he is interested in true single simple linguistic and mental assertions (*Cat*. 14b14–23). Single simple assertions signify either that one thing belongs to another thing or that one thing does not belong to another thing. The things in question are particulars (for example, the primary substance Socrates or a particular patch of red that is present in some subject), or universals insofar as they are universals (for example, human being or the color red insofar as they are universals), or universals (for example, human being or the color red) not insofar as they are universals (for example, human being or red insofar as they are universals) but insofar as they are particulars (for example, some human being insofar as they are an instance of the universal substance human being or some red insofar as it is an instance of the universal quality red).

We are now in a position to answer the second set of questions raised above in regard to the passage from *Categories* 12 (14b11–23), those about the relationship between the things that can be true or false and the πράγματα that in some sense cause them to be true or false (14b20). Based on the preceding analyses, I interpret the passage as follows:

- If some one thing *A* is, and there is an assertion that *A* is, then that assertion is true (14b14–18).
- The truth of the assertion *A is*, is in no way responsible for the being of *A* (14b18–19).
- The being of *A* is somehow responsible for the truth of the assertion *A is* (14b19–20).
- It is because the one thing *A* is or is not that an assertion about it is called true or false, not vice versa. Aristotle claims that the assertion *A is*, is true *iff*, and because, the *A* is (14b21–22).

Generalizing from this latter claim, we get: (TC) A statement *S* that an actual thing *A* is, is true *iff* (1) *S* exists and (2) *A* is. Given the claims in the passage, it is plausible to think that Aristotle would accept (TC). Moreover, a statement that something is, is *called* true or false because (by virtue of some causal relation) the thing is or is not. Presumably, Aristotle means here that it is correct to call a statement true (or false) when, and because, the thing asserted to be actually is (or is not). Thus, we can infer the following additional principles:

(TM) A statement *S*, that an actual thing *A* is, is true because *A* is and not because *S* is.
(FC) A statement *S*, that an actual thing *A* is, is false *iff* (1) *S* is and (2) *A* is not.
(FM) A statement *S*, that an actual thing *A* is, is false because *A* is not and not because *S* is.

It is important to note that none of the claims (TC), (TM), (FC), or (FM) are themselves explicit definitions of truth or falsehood. Second, even if Aristotle endorses these claims, he does not assert them explicitly in this passage and he does not suggest that they should be understood as definitions of truth or falsehood. The claims in the passage make it clear, however, that for Aristotle the truth values of statements depend (in some causal sense) upon the existence or non-existence of things. The existence or non-existence of things does not depend (in any causal sense of *depends*) upon the truth values of statements.

Truth and falsehood, then, according to this passage in the *Categories* (14b11–23) are functions of the way the world is. With respect to certain internal structural qualities, statements are like the real entities that make them true, and with respect to perceptible and intelligible qualities, beliefs are like the real entities that make them true. This is exactly what we would expect from Aristotle's real definition of assertoric truth and falsehood as developed in the *Metaphysics*.[19] According to that definition of true and false assertion, as with the account in the *Categories*, the relevant *truth-bearers* in the definition are single simple linguistic or mental assertions. Aristotle works hard in the *Metaphysics* to further clarify what he means by the term *one* in the context of talking about one being belonging to, or not belonging to, one other being. He arrives at the view that a single simple assertion is essentially constituted out of three components:

i. a linguistic or conceptual subject *n* that signifies or *is an exact measurement of x*, which *x* is a particular nature that is an exact first measure of a genus in one of the categories;
ii. a linguistic or conceptual predicate *d* that signifies or *is an exact measurement of y*, which *y* is a particular nature that is an exact first measure of a genus in one of the categories;
iii. either

(1) a linguistic or conceptual relation + that signifies or *is an exact measurement of* the real predicative relation of belonging to

or

(2) a linguistic or conceptual relation – that signifies or *is an exact measurement of* the real predicative relation of not belonging to.

Having clarified his account of single simple assertions, he then defines assertoric truth and falsehood as follows:

Assertoric falsehood (AF) is a privation of a complete activity of a psyche in which that psyche either

(a) linguistically or mentally asserts at time *t* that *d* + *n* and *y* does not belong to *x* at time *t*

or

(b) linguistically or mentally asserts at time *t* that *d* - *n* and *y* belongs to *x* at time *t*

or

(c) linguistically or mentally asserts at time *t* that *n* is definitionally the same as *d* and the simple thing *x* = *y* does not exist at time *t*.

Assertoric truth (AT) is a complete activity of a psyche in which that psyche either

(a) linguistically or mentally asserts at time *t* that *d* + *n* and *y* belongs to *x* at time *t*

or

(b) linguistically or mentally asserts at time *t* that *d* - *n* and *y* does not belong to *x* at time *t*

or

(c) linguistically or mentally asserts at time *t* that *n* is definitionally the same as *d* and *x* = *y* = *s*⊗*g* at time *t* (where *s* and *g* are, respectively, the species differential characteristic, i.e., the form or actuality, and the proximate generic characteristic, i.e., the matter or potentiality, that constitute the essence being defined, and where ⊗ represents the fact that the unity of the form and matter is different from the other kinds of predicative unity).

Thus, using AF and AT to ratify the account in the passage from the *Categories* (14b11–23) in terms of Aristotle's real definition of true and false assertion, truth and falsehood are functions of the way the world is in a strict mathematical sense—an assertion is true just in case and because it is an exact measurement of the world, otherwise it is false. With respect to the internal structural linguistic or conceptual relations of belonging-to and not-belonging-to, assertions are exact measurements of the real relations of belonging-to and not-belonging-to

structuring the real entities that make the assertions true, and with respect to perceptible and intelligible qualities, mental assertions are exact measurements of the real entities—the particulars, the universals insofar as they are particulars, and the universals insofar as they are universals—that make them true. This yields revised versions of (TC), (TM), (FC), and (FM):

(ATC) A single simple assertion *S*, that an actual thing *A* is, is true *iff S* exactly measures *A*.
(ATM) A single simple assertion *S*, that an actual thing *A* is, is true because *S* exactly measures *A*.
(AFC) A single simple assertion *S*, that an actual thing *A* is, is false *iff S* does not exactly measure *A*.
(AFM) A single simple assertion *S*, that an actual thing *A* is, is false because *S* does not exactly measure *A*.

Aristotle's conception of assertoric truth and falsehood in terms of measurement ensures that there is a reciprocal implication of existence between assertions and the things in the world that make them true. Acts of measurement intrinsically involve what is measured (for example, the length of a desk) and that by means of which we measure it (for example, a ruler). Acts of measurement thus involve essentially a symmetrical relation of existential dependence between a measure and what it measures. Aristotle's mensural conception of assertoric truth and falsehood also ensures that what is measured (the essence of a human being, for example) serves as the standard by means of which we assess our various attempts to accurately measure it by means of assertion. Acts of measurement, therefore, also involve essentially an asymmetrical relation of dependence: whether or not an assertion is an exact measure depends upon what it measures, whereas what is measured is an exact measure of itself independently of all assertions that may be made about it.

Conclusion

More needs to be said, obviously, about many of the claims made here, especially with regard to the sparse claims about the semantics of definitional assertions in the *Categories* and the carefully crafted account of definitional assertions in the *Metaphysics*. It would also be very helpful to make evident the mathematical underpinnings of the *Categories*, in general and not just with regard to the semantical claims. In particular, much of what Aristotle says in the *Categories* makes better sense when viewed in light of Book Iota of the *Metaphysics*. Nevertheless, I hope to have shown that a close inspection of this passage in the *Categories* (14b14–23) yields an account of assertoric truth and falsehood that serves well as a prelude to Aristotle's full account in the *Metaphysics*.

In closing let me once again express my gratitude and admiration for Tony. Whatever virtues this paper may have can be attributed in part to Tony. Its flaws are surely mine.

Notes

1 I addressed *Cat*. 14b14–23 in my dissertation (1995), but not insofar as it bears on the passage on Aristotle's account of truth. My view on these issues should be contrasted with Crivelli's readings (2004) and Long (2010 and 2004).

2 *Cf. Cat* 2a4ff. and *Int* 16a9ff.

3 All ancient Greek passages are from Minio-Paluello 1949. All translations of *Categories* are from, or based on, Akrill 1963 unless otherwise noted; all interpolations in brackets and presentation of Greek terms (in Greek script) are mine.

4 In acknowledging this class, Aristotle may grant that there are uncombined linguistic expressions that *do* constitute affirmations, of the sort Wittgenstein discusses in his later works. Ammonius (*On Aristotle's Categories* 35.4–9) addresses this issue in his comments on 2a4 (44–5), as does Porphyry (*On Aristotle's Categories* 87.35–40) Thus, the text supports the claims that Aristotle adopts a compositional account of statements, according to which a statement is generated by combining what is said without combination. He develops this account more fully in *De Interpretatione* and the *Analytics*, where he explains the signification of a statement as a function of its significant parts (taking into account the linguistic operators applied to these, such as quantifiers, negation operators, propositional connectives, etc.) and the manner in which they are related (either as combined or separated).

5 Ammonius (*On Aristotle's Categories* 32.26–33, 6) distinguishes among four ways in which Aristotle might have understood combination in this context. The meaning of λέγειν here, and in general, is difficult. It could mean *to say* and this is how it is usually rendered, and with good reason. It could also mean *to indicate, count, reckon*, and this sense allows for both linguistic and conceptual signification.

6 In the *Poetics*, Aristotle discusses nouns and verbs. He claims: "A sentence is one in two ways: (a) it signifies one thing (as in the case of definitions) or (b) it is a union of several sentences made into one by conjunction (as in the case of the *Iliad*)" (*Poet*. 1457a10–29). He does not elaborate on the unity of the thing signified in clause (a).

7 Nuchelmans cites 2a7 (also *Int*. 17a3 and 20a35) in support of the claim that only affirmations and denials are rightly called true or false (1973, 27). His discussion of Aristotle's account of true and false propositions remains helpful (23–44).

8 According to Aristotle's view (*Int.* 16a3–8), the linguistic terms and assertions of written and spoken language are conventional symbols of the intensional contents of thoughts in the psyches of language users and, by means of these intensional contents, these linguistic terms and assertions also signify the real correlates of the intensional contents. For discussions of Aristotle's account of linguistic signification and cognitive content, see Charles (2000), Modrak (2001), and Wheeler (1995 and 1999).

9 *Int*. 17a8–17a24 comprises *Int*. 5, and Aristotle defines statement-making sentences. Aristotle narrowly limits the kinds of linguistic entities that can bear semantic truth and falsehood—only linguistic assertions can. Names, indefinite names, verbs, indefinite verbs, and, quite generally, terms can't. They are "things said without combination," and in the *Categories* and *De Interpretatione* Aristotle seems to insist that truth and falsehood always presupposes assertoric combination (*Cat.* 2a7–10, *Int.* 16b26–7). Although he sometimes claims that all linguistic assertions are either true or false (*Cat.* 2a7–10, 13a37–b35; *Int.* 16a32–b5), we will see that he backs off that claim. Crivelli notes that 17a1–4 appears to define the assertion in terms of bearing a truth-value (2004, 86–87; Crivelli also notes various authorities who take the passage to specify the differentia of assertions, and one who didn't [87, n. 31]). The question is whether it should be understood as a claim about all and only assertions, or a claim about only assertions but not all assertions. Names and verbs are assumed to be separately significant spoken sounds. cf. *Int*. 17a9 and 19b10–12.

10 *Cat*. 2a7–10, 4a21–b19, 13a37–b35, 14b11–23; *Int.* 16a32–b5, 16b26–17a26, 17b12–16, 17b23–37, 18a35–7, 18b7–8, 19a4, 19a33–4, 19b5–20b11, 24b8; *An post*. 75a27,

83a1–2, 100b6; and *Soph. el.* 180b2–5, 182a10. See also *Metaph.* 1011b23–29, 1024b26–1025a1; *Poet.* 20–1.

11 The subject of an affirmation may also be an indefinite name.

12 Liddell and Scott do not restrict the meaning of this for Aristotle to negation. This seems incorrect.

13 Or an indefinite name.

14 The ordinary language syntax of these affirmations can be logically transformed into Aristotle's technical syntax for simple statements. Thus, for an example, the ordinary Greek locution *every man is white* can be transformed into the more technical (although, for Aristotle, logically equivalent) locution *white belongs to all of man*.

15 For example, Aristotle's query at *Int*. 20b31–2 presupposes that terms can have more than one name for syntactic parts.

16 Aristotle investigates whether or not the antecedent of this conditional is true: what sort of true belief is contrary to a false belief, the belief of the negation or the belief that the contrary holds? I will not analyze here the details of the argument. Caston cites 23b4–5 in support of the claim that the relation between sentences and beliefs need not be one-to-one (1999, 207).

17 Caston cites 24b1–2 in support of the claim that all meaningful statements symbolize a corresponding thought (1999, 208). In *Posterior Analytics*, Aristotle cements the idea that the mental states involved in demonstrative knowledge bear truth and falsehood (*An. Post*. 71b16–26). Aristotle makes claims that imply that cognitive states involve truth-bearers and that these are true in virtue of things in the world (*An. Post*. 100b5–17). Here, Aristotle uses τὸ πρᾶγμα to mean that which corresponds with the state of ἐπιστήμη or νοῦς. It is also obvious from Aristotle's discussion of dialectic in the *Topics* and the *Sophistical Refutations* that the mental states involved bear truth and falsehood. At *Topics* II.4, Aristotle presupposes that perception is a species of judgment and that all judgments are either true or false (*Top.* 111a14–20). At *Topics* IV.2 the implication is that beliefs are truth bearers (123a15–19). At *Sophistical Refutations* 22, Aristotle explains the category in which truth and falsehood fall (*Soph. el.* 178b24–9). In the larger context, Aristotle is dealing with fallacies that depend upon using an identical expression for things that are not identical. The claim is that the falsity or truth of a statement or belief indicates not a this but a such.

18 For examples in terms of linguistic assertions, see Aristotle's definition of a premise and of a term (*An. pr.* 24a16–b18) and his discussion of definitions in *Posterior Analytics* (*An. post.* B 10). For examples in terms of mental assertions, see *An. pr.* 67b12–26 where Aristotle assumes that the relation of terms in a syllogism corresponds with the relation among beliefs and *An. post.* A 33 where he considers the difference between knowledge and opinion.

19 The full defense of this interpretation of the theory of truth in the *Metaphysics* can be found in Wheeler (2019).

Bibliography

Ackrill, J. L. trans. 1963. *Aristotle's Categories and De Interpretatione*. Oxford: Clarendon Press.

Caston, Victor. 1999. "Aristotle on the Conditions of Thought." Proceedings of the Boston Area Colloquium in Ancient Philosophy XIV, edited by John J. Cleary and Gary Gurtler, 202–14. Leiden: Brill.

Charles, David. 2000. *Aristotle on Meaning and Essence*. Oxford: Oxford University Press.

Crivelli, Paulo. 2004. *Aristotle on Truth*. Cambridge: Cambridge University Press.

Hestir, Blake. 2013. "Aristotle's Conception of Truth: An Alternative View." *The Journal of the History of Philosophy* 51, no. 2: 193–222.

Long, Christopher P. 2011. *Aristotle on the Nature of Truth*. Cambridge: Cambridge University Press.

Minio-Paluello, Lorenzo, ed. 1949. *Aristotelis categoriae et liber de interpretatione*. Oxford: Clarendon Press. Thesaurus Linguae Graecae Digital Library, edited by Maria C. Pantelia. Accessed 2018 http://www.tlg.uci.edu.

Modrak, Deborah K. 2001. *Aristotle's Theory of Language and Meaning*. Cambridge: Cambridge University Press.

Nuchelmans, Gabriël. 1973. *Theories of the Proposition: Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*. Amsterdam and London: North Holland Publishing Company.

Wheeler, M. R. 1995. "Real Universals in Aristotle's Organon." PhD diss., University of Rochester.

———. 1999. "Semantics in Aristotle's *Organon*." *The Journal of the History of Philosophy* 37, no. 2: 191–226.

———. 2019. *Being Measured: Truth and Falsehood in Aristotle's Metaphysics*. Albany: SUNY Press.

16 The Gods of the Garden

John Thorp

Introduction

With his determined physicalism—indeed atomism, his denial of the afterlife, his rejection of teleology, his empiricism, his disbelief in Providence, and his embrace of intelligent hedonism, Epicurus would seem to come closest of all the main ancient philosophers to prefiguring the *Zeitgeist* of our contemporary secular West. The one big difference, it seems, is over God: where the secular West lands somewhere on the path that runs through agnosticism to atheism, Epicurus appears to believe that the gods exist, and he appears to have very definite ideas about their nature.

Both the *Letter to Menoeceus* and the *Key Doctrines* open with clear commitments to theism:

> For verily there are gods, and the knowledge of them is manifest ...
>
> (Diog. Laert. X.123)[1]

> A blessed and eternal being has no trouble himself and brings no trouble on any other being ...
>
> (Diog. Laert. X.139)

I say, however, that he *appears* to believe that the gods exist, for even in antiquity there was widespread suspicion that his theism was feigned, whether to avert prosecution for impiety, or even perhaps just to avoid unnecessarily antagonizing his readers.[2] This suspicion, woven into the intense polemics among the philosophical schools, was doubtless motivated by the fact that any sort of traditional religious belief sat ill with his materialism, his denial of afterlife, and his insistence that the gods are serenely disengaged from this world. And always, that accusation of atheism was issued in criticism; it was meant as a severe reproach.

The mood is very different now. In the last century-and-a-half, and especially in the last few decades, the idea that Epicurus didn't actually believe in the independent existence of the gods has found some thoughtful supporters (e.g., Long and Sedley 1987, 139–149; Obbink 2002, 183–185; Sedley 2011). What has changed is that those who now cast him as, essentially, an atheist, do so not with reproach, but rather with approval. They see him as holding to a subtle picture

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according to which, though the gods do not exist independently, they do exist as creatures of our own minds: they exist as ideas, and that, it is claimed, is good enough. And so, I suggest, these scholars would draw Epicurus more completely, and quite comfortably, into our own worldview.

These scholars offer what has come to be known as an Idealist interpretation of Epicurus' theology; there continue, of course, to be Realists, holding that the independent existence of the gods is the only tenable interpretation of the Epicurean texts (e.g., Mansfeld 1993; Babut 2005; Konstan 2011).

What I want to do here is to consider this debate, assessing it as a philosopher. I won't be offering any fresh evidence from texts in monastery libraries or from newly unfurled papyri; for that I stand on the shoulders of giants with different competences than mine. But I do want to notice and consider a grave metaphysical problem that arises for the Idealist reading of Epicurus, and that threatens to sink it as a coherent position.

On *Truth* in Epicurus

Before I get to that issue, I need to advance an observation about the idea of *truth* in Epicurus.

Let us consider sense perception, and for ease we'll take its paradigmatic mode, vision. We know that, according to Epicurean theory, sheets of atoms, εἴδωλα (images, icons), detach from the surface of remote objects, travel rapidly through the air, and enter our eyes, presenting themselves to our cognition (Diog. Laert. X.45–47). "All impressions are true" goes the Epicurean slogan,[3] and by that is meant that the perceiving sense is never in error about the array of atoms, the *eidolon* that is presented to it. It is a little like the sense-datum theory of the later twentieth century, except that where the latter understood sense-data as non-material, mental entities, Epicurean theory appears to understand the contents of consciousness as material, an array of atoms.

Here, then, is one important kind of truth: the inescapable truth of the mind's grasp of each atomic *eidolon* that is presented to it. We might call this *primary truth*; there is no such thing, it would seem, as primary falsehood. Also, though, we must remember that the Greek word for *true* (ἀληθής) also means *real*. Our grasp of the *eidola* is true; and the *eidola* themselves are real things. This point about the material reality of images, ideas, will recur as we examine Epicurus' thought.

There is, of course, more to the story. These arrays of atoms, these *eidola*, as they travel through the air, may become distorted in various ways. They may be bumped into by other atoms; they may become compressed or dilated, and so forth (Lucr. IV.353–363). And so, the *eidolon* that arrives at a person's eyes may or may not be a faithful representation of the surface of the remote object from which it departed. Where it is not a faithful representation we might say that, although the mind has a true grasp of the *eidolon*, it does not have a true grasp of the remote object: its grasp of that is false. We might call *this* question of truth-or-falsity a matter of *secondary truth*.

The epistemology of secondary truth is somewhat complex. Although Epicurus is inclined to accept the data of sensation at face value, he does of course acknowledge that it may sometimes err and give a false impression of the remote object. The old chestnut of the square tower that, seen from a distance, presents itself as round, is prominently discussed (Diog. Laert. X.34). Epicurus acknowledges that some sense impressions must be taken to be of doubtful truth, and these must be subject to confirmation or refutation (Diog. Laert. X.34, 38). It is not clear, however, how to tell whether a given sense impression should be taken to be doubtful—obscure, and it is not clear exactly how the doubt is to be resolved. Broadly, however, Epicurus trusts that sensation gives us a true understanding of the world; moreover it is, at base, our only means of knowing that world. He has no truck with Skepticism and its worries.

The analysis of visual perception is, in Epicurus, the master model for cognition. The other sensory modalities are taken to operate in a parallel way (Diog. Laert. X.52–53). Memory is achieved by the mind's picking out and focusing on some of the chaotic profusion of images that surround us in the air—images left over from times past. There are cases, too, where an *eidolon* corresponds to no single remote object, but to a mixture of several, as with dreams or imaginings of griffins or unicorns; there may even be cases where the *eidolon* is nothing but a chance combination of stray particles hurtling about in the world's atomic storm.[4] Thinking, also, is taken to be a matter of the reception of atomic images, although here the images are subtler, finer, made of smaller atoms; they enter the human body through tiny pores, rather than through the grosser portals of the sense organs.[5] The distinction between sense-content and thought-content seems to be purely a matter of the size of the atoms that make up the images. The thought-images are perceived by the mind-atoms that are aggregated in the breast (Diog. Laert. X.63–64).

However all that may be, our distinction between primary and secondary truth will help us to make sense of such troubling Epicurean remarks as "all impressions are true" and "all gods are true."[6] It will also help us to find our way as we struggle with Epicurus' claim that most people have wrong ideas about the nature of the gods.

Three Constraints

Like the gates that define a slalom course, there are three broad features of Epicurus' philosophy that constrain the paths that we may take as we assess the options for his true understanding of the gods.

The first is his therapeutic project: his attempt to persuade people that their common idea of the gods as concerned with our behavior, and as meting out punishments and rewards accordingly, is wrong, is false. This is his benevolent enterprise to free people from their worst and deepest anxieties, the anxieties that impede their achievement of the blessed state of ἀταραξία (tranquility, untroubledness).[7] It is his undertaking to liberate the mass of people from the grip of fearful superstitious practices, and from the wasted effort of petition,

propitiation, or thank offering to the gods. This therapeutic project of course requires that Epicurus be able to make a well-founded claim that some conceptions of the gods are true—namely those that take the gods to be wholly indifferent to us and our doings—and that others are false—namely those that take the gods to be jealous and punitive supervisors of our lives (Diog. Laert. X.124). Whatever understanding of Epicurean theology we reach, it must preserve the therapeutic project as well-founded: the common idea of the gods must be shown to be false, and the new idea of the gods as serenely disengaged must be shown to be true.

The second constraint is Epicurus' materialism. We must do him the courtesy of supposing he adheres to his foundational dictum that the only realities are bodies and void. It is part of this picture that anything we might think of as mental contents are simply arrays of atoms: if I have a perception, a memory, an imagining, or a dream of a cat on a mat, that is because there is a physical array of atoms in the figure of a cat, and a physical array of atoms in the figure of a mat, and the first is above the second: this compound atomic array is present in my breast, and is thus available to my mind (Diog. Laert. X.63–66). It is worth noting that Epicurus' physicalism here is *direct* physicalism, not *codical* physicalism; that is, the appearance of which I am conscious is the appearance of the atomic array itself; the atoms are not an *encoding* of the appearance. (By contrast, we would say that neural activity—ultimately motion of atoms—in the occipital lobe of the brain *encodes* the experience of green: there is nothing actually green in the brain.)

It is an implication of this materialism, too, that there are no such entities as separately-existing universals or concepts; Epicurus allows us to speak of *common notions* (κοιναὶ ἔννοιαι), but such notions cannot exist independently of concrete atomic arrays in individual persons' breasts. If gods exist as concepts, then they exist nowhere else than in the atomic arrays present in individual persons: each person would have their own god(s), though of course yours may well be quite similar to mine—or not.

The third constraint is really an implication of Epicurus' materialism; it is what I might call the self-identity of mental contents, that is, the atomic arrays that are present to the mind. They are what they are; they may be accurate representations of some remote object; they may be a muddled confusion of such representations; they may even be a chaotic mixture of atoms issuing from no remote object at all: whatever—they still are what they are and, being made of atoms, they will participate in the causal flow of the world.

The Serious Problem for Idealism

If the gods are simply our ideas of gods, and there are no remote objects generating those ideas—throwing off those *eidola*—then the following problem arises. Any and all god-ideas will have primary truth, and none will have secondary truth. All god-ideas will be equally valid, and equally invalid. And thus, at least *prima facie*, Epicurus would lose the metaphysical grounding for his therapeutic project. For that project requires that ideas of gods as judgmental and punitive be false,

whereas ideas of gods as serenely uninterested in humans and their doings would be true. But if in fact there are no gods out there at all, then what is the meaning of saying that some god-ideas are true and others false? In what would the truth or falsity of these ideas consist?

It is worth recalling here, of course, that there is no place in Epicurus' system for any sort of *spiritual* or non-physical existence of the gods. If they exist as independent objects out there somewhere, they are physical objects, made of atoms. And, if they exist only in our minds, then they are still physical objects, made of atoms. And if there is a common notion of this or that god, then it is only because the *eidolon* in your breast is similar to the one in mine: the two ideas may have formal, but not material, unity; and that formal unit cannot act in the world; the only god-actors in the world are the individual *eidola* in your breast and in mine.

Epicurus is sensitive, of course, to the need to ground his claim that the idea of providential and punitive gods is false, and the idea of indifferent gods is true. He offers, in his *Letters* and across the fragments of his works, a number of different thoughts as to how this distinction might be grounded. The question I want to ask here is whether any of these proposals is compatible with an Idealist theology. If the gods are nothing other than our ideas of gods, then how could some of them be true and others false? There would be nothing for them to be true or false *to.* The question of their secondary truth or falsity would not even arise. The therapeutic project would seem to collapse.

Prolepsis

A recurrent theme in Epicurus' treatment of the gods is the claim that we know them by πρόληψις (*prolepsis*)—preconception—and that this is some sort of warrant of the truth of our understanding. *Prolepsis* gives us the true idea of the gods as blessed and eternal; ὑπόληψις (*assumption*) produces the false ideas of the judgmental gods. To assess this picture we need a clear understanding of what Epicurus means by *prolepsis.* For sure, it was a centerpiece in his epistemology. But also, its exact meaning is far from clear.[8]

We know that the term was coined by Epicurus himself (Cic. *Nat. D.* I.44).[9] We also know that it was one of the three foundational items in his epistemology: sensations (αἰσθήσεις), *prolepses*, and feelings (τὰ πάθη, Diog. Laert. X.31). These are the three self-evident data on which all knowledge must ultimately rest.

Unfortunately, though, the term seems to have captured the imagination of many thinkers in antiquity, and to have, so to speak, gone viral. It was widely commandeered, and it suffered, in consequence, a serious loosening of its original meaning, whatever that may have been. Here is Diogenes Laertius, writing six centuries after Epicurus:

> Preconception [πρόληψιν], they say, is as it were a perception, or correct opinion, or conception, or universal 'stored notion' (i.e. memory), of that which has frequently become evident externally: e.g. 'Such and such a kind of thing

> is a man.' For as soon as the word 'man' is uttered, immediately its delineation also comes to mind by means of preconception, since the senses give the lead. Thus what primarily underlies each name is something self-evident.
> (Diog. Laert. X.33; trans. Long and Sedley 1987, 87–88; my interpolation)

It seems impossible to think that something so loosely defined and so disjunctively characterized can have been taken by Epicurus to be a self-evident foundation for knowledge—indeed, one of only three such foundations. If it was, then his epistemological system seems hopelessly slack, not at all in keeping with the high epistemological care that he repeatedly enjoins (Diog. Laert. X.38, 52, 62, 63). Let me attempt—somewhat speculatively, I admit—to reconstruct what Epicurus might have had in mind when he introduced *prolepsis* into his Canon.

First, it seems clear that the object of a *prolepsis*, what is cognitively seized, is what we would call a concept, a universal. We see and hear and smell the individual cow, but somehow we cognitively grasp the universal cow.

Second, it would seem wrong to think—as most do—that Epicurus holds that such concepts are acquired by compiling and comparing individual memories and extracting what is common to them. The traditional name of this manner of deriving concepts is *induction*. But induction is something that our minds *do* with the data; it is a mental movement that accumulates and sorts the data. And Epicurus is wary of any "movement in ourselves" that is distinct from simple perception, for it would be a potential source of error (Diog. Laert. X.51). The other two self-evident items in the Canon, sensations and feelings, are *data* in the etymological sense: given. They are not the product of our manipulation; they are simply *given* to us, *presented* to us; we are their passive recipients. *Raw data* seems an accurate phrase to capture this feature of them. *Prolepses*, if they are to keep company with these other foundational items, would then be concepts that are raw data, directly given; *hypolepses*, by contrast, would be concepts that go beyond the raw data, assumptions that we make in treating that data. The question then arises: can Epicurus have understood (some) concepts as raw data—as opposed to something that we actively distill from a collection of remembered sensations?

If we were in Plato's world, this could be straightforward enough. The universal would be a real object out there (albeit not material), and it could imprint itself on our minds directly. But of course in Epicurus' world there are no independently existing universals out there.

There is, however, the following possibility. One could take the view that when a sensory image emitted by an individual cow strikes the sense, the perceiver detects at once the central features of the sortal. One could hold that amid the complex of ingredients making up that image, the generic ones stand out, are salient.[10] We are so used to the inductive story about how we acquire concepts, that this idea may seem strange. We should remember, though, that Epicurus is at work well before the New Riddle of Induction was on the scene. And we might also recall that, in a very famous passage, Aristotle seems to have held something rather similar:

> when one of the undifferentiated things makes a stand, there is a primitive universal in the mind (for though one perceives the particular, perception is of the universal—e.g. of man but not of Callias the man).
>
> (Arist. *Post. an.* 100a15–19; trans. Barnes 1975, 166).

Aristotle, it is true, says this in the midst of elaborating an inductive story about concept-acquisition. But he is speaking about the very first moment in that acquisition, and he holds, it seems, that, at that moment, the universal is detected.[11] This idea, it seems to me, would serve Epicurus well. Sortals can be immediately given along with sensations: they are inherent in, and salient among, the ingredients of those sensory *eidola.* They are *in* the images.

(Incidentally, here, it has always seemed to me that Diogenes' explanation of the *pro* (προ) in *prolepsis* is very contrived. He puts it this way: we couldn't say "that object is a cow" if we had not acquired the concept of cow *beforehand* (Diog. Laert. X.33). Thus the *pro* is taken by him to be temporal in force, and the natural English rendition is *preconception*. Now, in the same passage he discusses the fact that opinions and assumptions, previously subject to doubt, can eventually be shown to be true, or false; why, then, by parity of reasoning, would they not be called *pre-opinions* and *pre-assumptions*?—for they were opined and assumed *before* they were shown to be true, or false. It is at least possible that when Epicurus coined the term *prolepsis* he had in mind the *pro* of prominence, of standing out—think προβόλη (projection, promontory), or προέδρος (president), or προαίρεσις (preferential choice). When the sensory image of the cow arrives, it arrives with its generic elements salient, while the others lie somehow in the background: cognition's primary grasp (*pro-lepsis*) is of the sortal: of cow rather than of brown or piebald. Some support for this non-temporal understanding of *prolepsis* lies in the fact that Lucretius generally renders the term in Latin as *notitia* or *notities*: he feels no need to include the idea of temporal priority.)

This depiction of *prolepsis* does not, of course, preclude a role for induction in our dealing with concepts. Of course we manipulate concepts. We refine them, passing from sortal to essence. We redefine their relationships, taking *whale* from the family of fish and assigning it to the mammals. We fuse them, making camelopards (giraffes) out of camels and leopards. And so forth. The products of this sort of manipulative activity, though they are concepts, would not, presumably, count as *prolepses*: they would have lost their rawness.

However all of that may be, it is at least clear that Epicurus understands *prolepses* as kinds of clear generic images—concepts—that claim strong epistemic reliability. Do they help with our question about Epicurus' theology?

The answer is: not at all. In a Realist theology, they could play an important role; if having a *prolepsis* of *X* is a guarantee that remote objects exemplifying *X* exist, then of course, by definition, a *prolepsis* of the gods as blessed and eternal is a guarantee that the gods exist and are indeed blessed and eternal.[12] But, in an Idealist theology, the gods do not exist as remote objects. The claim that we have a *prolepsis* of the gods as serenely indifferent, but only a *hypolepsis* of them as

severely supervisory, will founder on the point that our ideas are atomic realities, and they simply are what they are.

The question stands: if the gods are just our ideas of gods, then how can some ideas about the gods be true and others false? Note that this is a metaphysical question, not an epistemological one: in what would the truth or falsity of such ideas *consist?*

Other Virtues of the *True* god-Concepts

Scattered through the records of Epicurean thought there occur two other arguments in favor of the truth of the idea of the gods as blessed and everlasting, as opposed to the idea of them as supervisory and punitive.

First, there is the innateness argument, the claim that when we are born we already possess the pure idea of god as blessed and everlasting (Cic. *Nat. D.* I.45). Notions of supervision and punitiveness are later accretions. This claim figures easily in defenses of Idealism.[13] But although it would accord a kind of importance to that inborn idea, it would not furnish a metaphysics to ground its truth: it is, after all, perfectly conceivable that we are born with some false ideas already in us. Indeed, in Epicurean theory, precisely that occurs to humans in the case of pleasure: they are born with an instinctive desire to pursue pleasure and avoid pain. They later learn that those inborn instincts are too crude: real pleasure lies in the absence of pain. The innateness of an idea does not guarantee its truth.[14]

Second, there is the antiquity argument. It is claimed that in the earliest ages of humanity, the idea of gods was that of blessed and everlasting beings; only later did degenerate ideas about supervision and punitiveness move in (Lucr. V.1161ff). This fits with a clear drift in Epicureanism of *golden-age* thinking, that is, the idea that people had things right back at the beginning, in the golden age; everything has been downhill since then (Obbink 2002, 220). Here again, though, the fact that a given idea was primitively held does not guarantee its truth.

There is a pattern in the failure of these arguments: neither would offer the Idealist a *metaphysical* foundation for a distinction between true and false ideas of the gods.

Logical Impossibility

Another line of thought in Epicurus may be more fruitful. He argues that there is logical inconsistency between the idea of the gods as blessed and eternal, on the one hand, and the idea of them as judgmental and punitive on the other (Diog. Laert. X.78; Cic. *Nat. D.* I.45). Basically: a blessed being cannot be fussily distracted from its happy self-absorption. He argues, moreover, that the central or essential idea of the gods is as blessed and eternal. It follows that the common idea of the gods—blessed, eternal, judgmental, and punitive—is an incoherent idea. And accordingly, no corresponding object could possibly exist.

This looks elegant, and quickly productive. It seems to provide a metaphysical foundation for one-half of Epicurus' therapeutic program: the common idea of the

gods is false because it is logically impossible: no such beings *could* exist. We must, however, be more careful, more circumspect.

We must remember that, for Epicurus, the images that are the contents of consciousness are material objects: clusters of atoms. This strikingly clean and crisp idea has, at least *prima facie*, a surprising result. And in the present argument, based on the claim that the idea of the gods as both blessed and punitive contradicts itself, we bump up directly against that result.

If an alleged external object is logically impossible because it combines incompatible properties, then *the idea of that external object will itself be an impossible object*: it cannot exist. Thus if an alleged external object is both round and square (at the same time, in the same respect, etc. etc.) then the *idea* of such an object is itself an impossible material object. If the object cannot exist, then, given Epicurus' materialist epistemology, the idea of it cannot exist either. So, if someone has an idea that they think may be self-contradictory, then, in fact, it is not self-contradictory: if it were, then it could not exist; they could not have that idea. If you can have an apparently self-contradictory idea, then that shows that the idea is not self-contradictory after all. Arguments from alleged logical impossibility systematically undermine themselves.

Epicurus' argument based on logical impossibility, which at first looked promising, stumbles; it trips over itself. But of course, even if it did not stumble over itself in this way, at best it would prove that the common idea of the gods is somehow odd; it would not ground the falsity of that idea for there is still nothing for it to be false *to.* We need to look deeper.

Fraud and Puffery

In our discussion thus far, we have held to a standard correspondence model of truth: the conceptual images in us have secondary truth if they correspond to a remote object, and secondary falsity if they do not. And this has meant that, if the gods are nothing more than our concepts, there is nothing for them to be true *to*, or false *to*. And so theological Idealism has seemed incompatible with Epicurus' therapeutic project: there is simply no meaning to the claim that a given god-concept is true, or that it is false.

There may be another option. I don't think we can find it made explicit in what we have of Epicurus' texts, but perhaps we can glimpse it as inherent in an *ensemble* of his teachings—his teachings about death and afterlife on the one hand and his astronomical theories in the *Letter to Pythocles* on the other.[15]

Imagine that you have, installed in your breast by your upbringing in third century BCE Athens, the common concept of the gods as supervisory and punitive. You are, however, a thoughtful person, and you have heard about, and become intrigued by, the physical theories proposed by Epicurus—atoms and void, material nature of soul, and so forth. You find these theories quite persuasive. You also realize that you have no direct access to the gods to check whether or not your inherited concept of them is true. But you start to notice some things. The first is that, if Epicurus' materialism is right, then there can be, as he says, no conscious

afterlife. That means that any fears you had that, by judgment of the gods, you might have to spend eternity in pain, must be groundless: after your death you will have no consciousness at all. That removes half of your deep anxiety. Your other fear is that the gods might exercise their justice, or their whimsy, on you in this life, employing their usual tool for that—the weather: striking your house with lightning, shipwrecking you in a storm, or ruining your crops by a drought. But then you read the *Letter to Pythocles* and find there a set of physical theories that offer adequate explanations of all those astronomical and meteorological happenings,[16] and that make no reference to the activity of gods. Indeed, the motto of that whole treatise seems to be: μόνον ὁ μῦθος ἀπέστω, just keep myth out of it! (Diog. Laert. X.104).

To the extent that you find the meteorological theories of that *Letter* attractive and convincing, you will be led to abandon any idea that the gods are going to weaponize the weather to hurt you. Little by little you see that your fear of being harmed by the gods is incompatible with the theories of physics, and of astronomy, offered by Epicurus. If that cluster of theories, that system, seems true, you'll have to revise your concept of the gods; you'll have to give up the idea that they are out to punish you, either in the next life (which doesn't exist) or in this one (because the weather runs by blind material causes). The more you subscribe to the extra-theological theories of Epicurus, the more you will come to see that your theology is wrong. Nothing here persuades you that there are no gods, exactly, but everything persuades you that, if there are gods, you have been wrong about their nature and their capacities: their claims to punitive power are baseless: they are frauds and charlatans.

And so we see a way in which, even if the gods exist only as concepts, some such concepts can be true and others false. The false gods are false because they are deceitful.[17] They exist in people's breasts and can do some local harm there, instilling terror. But they can't carry through on their threats: they can't *actually* create and manage an afterlife; they can't *actually* run the weather. The scary powers they claim for themselves—or that others claim for them—are illusory, chimerical. Their reputation is mere puffery.

Consider, also, something else. The gods of common understanding, the supervisory and punitive beings, would need to exist independently of our ideas if they were to be able to do what is expected of them. The weather could not be managed by millions of different god-ideas in individual breasts. There would need to be a unitary god—or at most a small committee—doing that! But the gods of Epicurus, the gods whose lives are blessedly untroubled (Diog. Laert. X.139), whose images give humans an understanding of that divine nature (Cic. *Nat. D.* I.49) so that they may emulate it (Diog. Laert. X.124), do not need to exist *out there* to do their job: it is enough that they be present to the cognition of individuals. Human beings can well be inspired by entirely fictional characters. For Epicurean theology, then, it would seem that Realism is otiose and Idealism is good enough.

We have, then, cleared the way for Epicurus to be an Idealist: we have answered the fundamental philosophical objection to that position, namely, that

it would destroy the metaphysical foundation for his therapeutic project, the distinction between gods that are true and ones that are false. We can save the project by noting that, for god-concepts, secondary truth or falsity is not a matter of their crisp one-to-one correspondence with remote entities, but rather of their coherence, their fit, with a broad understanding of the world and how it works. Although I would not want to press this language too hard, we have saved the day for Idealism by showing that the concept of truth that it requires is not that of *correspondence*, but rather that of *coherence*.

The Epicurean Idealist Credo

Here, then, is the Idealist picture in a nutshell.

Gods exist only as images in people's breasts; they do not exist in the way that is normally supposed, namely, as remote, stable, beings. These god-images, like all ideas, are material entities, agglomerations of atoms; as such, they participate in the causal to-and-fro of the world. Their immediate causal reach is quite local, namely the individual soul (also material) in which they are housed. They may cause feelings (also material) in that soul, whether of anguish and fear, of serene and happy calm, or of many things between. These god-images have primary truth: they are real material entities, and our cognition of them is unerring. In that sense, "all gods are true." They are true in the way that images in dreams, or in the delusions of madness, are true (Diog. Laert. X.32).

Like such dreams and delusions, however, they lack secondary truth in the normal, straightforward sense of exact correspondence with an outside object—for the simple reason that there are no such outside objects. In that sense, all gods are false. However, if we allow ourselves to step from a narrow correspondence theory of truth to a looser coherence theory, the secondary truth or falsity of the gods will vary according to which particular gods are in question. The traditional gods, supervisory and punitive, are false because their claims to punish us by weaponizing the weather or by torturing us in the afterlife are false: such claims of power do not cohere with the very broad theory of the physical world that Epicurus offers. Epicurus' gods, however, are true in the sense that they do cohere with that physical theory; the theory does not require them, but it does not reject them. Moreover, these sweet, unruffled gods are particularly welcomed by Epicurus' *ethical* theory, for they draw people to emulate the divine condition of serene tranquility. And so, Epicurus can claim that the old gods are false, and the new gods—understood as living blessedly calm lives disengaged from petty concerns—are true.

That said, it cannot be denied that Epicurus nearly always writes in a way that strongly suggests Realism. If he is in fact an Idealist, how can we explain his thoroughly Realist language?

Liturgical Loyalty

It has always seemed strange that Epicurus, whose system rejects common ideas about the gods, should nonetheless have shown respect for traditional liturgies,

and willingness to recommend that his followers observe them. I think we can suppose that he would want his followers, as they keep such observances, to do so with certain mental reservations, a certain detachment. Even in our own time, this attitude to religious tradition is familiar enough: a generalized reverence that is broadly benevolent, but nonchalant about credal details.[18]

Herein, I think, lies the answer to our question about the clear Realist tone of what Epicurus writes about the gods. He is content to stay with a broadly traditional picture, provided only that the understanding of the gods' moral nature be revised. It is not necessary to his purpose, and would likely be counterproductive, to say that the gods are just our ideas of them. He is the wise rhetorician, understanding that one should only say as much of the truth as one's audience is able to hear. But also, if you want a tranquil life, it is best to avoid unnecessary scandal and controversy.

Of course it is also possible that Epicurus was *deliberately* elusive on the subject, furnishing ample surface evidence that he was a Realist about the gods, while, at the same time, creating a thought-world that is welcoming to Idealism, a world in which the gods are nothing more than our ideas of them. And if elusiveness was his aim, he has met with stunning success: we have been debating the question for over two millennia.

Notes

1 Unless otherwise noted, all translations of Diogenes Laertius are from Hicks (1991).
2 The evidence is assembled and discussed in Obbink (1989, 188–189).
3 Thus, the title of chapter 16—the first chapter on Epicurean epistemology—in Long and Sedley (1987) is "The truth of all impressions." The phrase recapitulates the longer discussion at Diog. Laert. X.31–32 and also Lucr. IV.469–521; more directly it picks up Sextus Empiricus' report that Epicurus said that "all sensibles are true" (Sext. Emp. II.63; trans. Bury 1983, 269). Sextus speaks of *sensibles*, that is, the data of sense perception, but it is right to extend the idea to include other impressions as well, since Epicurus explicitly says that the impressions of madmen and those given in dreams are true (Diog. Laert. X.32).
4 See Thomas (2021) for a particularly good description of this storm of atomic images.
5 The whole account of these various cognitive states, understood as the reception of *eidola*, is set out in Lucr. IV.722–748. On the inadequacy of the image-model for thought, see Long (1974, 56).
6 The clearest evidence is in Philodemus. See the text and discussion in Obbink (2002, 209–218).
7 This program is extensively described at Lucr. VI. 68–79.
8 There has been a large and dense literature on the Epicurean idea of *prolepsis.* See: Currie (1961); Rist (1972, 26–30); Schofield (1979); Asmis (1984, 99–100); Glidden (1985); Annas (1992, 167–169); Mansfeld (1993); Goldschmidt (2006); Morel (2008). The most thorough treatment—and it is breathtakingly careful and compendious—is Tsouna (2016).
9 All translations of Cicero are from Rackham (1979).
10 There is of course a problem about just what such a "generic image" would look like. Could there be an image of "cowness" that lacks any features of a particular cow?
11 LSJ give "detect" as one of the meanings of προλαμβάνω.
12 Sceptics about this proof of the gods would want to know how we know that what we are having is indeed a *prolepsis*, and not just some other clear concept; they would also

want to know why we can't have *prolepses* of nonexistent things: we seem to have pretty clear concepts of centaurs!

13 Of particular note here is Sedley (2011).

14 We generally take *innate* to mean present in us from the beginning, from birth. See Konstan for a different account of the Latin *innatus* in Cicero's discussion of these matters (2011, 67–68).

15 One could perhaps construe the first approximately 100 lines of Lucretius' Book VI as offering this argument.

16 Indeed, for many meteorological phenomena Epicurus, in the *Letter to Pythocles*, offers several different explanations. See Asmis (1984, 321–330) for a discussion of this surprising redundancy.

17 Charles Kahn discovered that in the earliest occurrences of the word ἀλήθες, in Homer, it was applied to persons and it meant sincere, truthful (1973, 363 ff.).

18 To my mind, one of the best descriptions of this religious attitude, combining reverence with benign detachment, is to be found in Walter Pater's 1885 novel *Marius the Epicurean*.

Bibliography

Annas, Julia. 1992. *Hellenistic Philosophy of Mind*. Berkeley: University of California Press.

Aristotle. 1975. *Aristotle's Posterior Analytics.* Translated with Notes by Jonathan Barnes. Oxford: Clarendon Press.

Asmis, Elizabeth. 1984. *Epicurus' Scientific Method*. Ithaca and London: Cornell University Press.

Babut, Daniel. 2005. "Sur Les Dieux d'Épicure." *Elenchos* 26, no. 1: 79–110.

Cicero. 1979. *De natura deorum. Academica*. Translated by Harris Rackham. Cambridge: Harvard University Press and London: William Heinemann Ltd.

Currie, H. Macl. 1961. "Epicurean Prolepsis." *Phronesis* 6, no. 1–2: 82.

Diogenes Laertius. 1991. *Lives of Eminent Philosophers*. Translated by Robert Drew Hicks. Cambridge: Harvard University Press and London: William Heinemann Ltd.

Glidden, David K. 1985. "Epicurean Prolepsis." *Oxford Studies in Ancient Philosophy* 3: 175–217.

Goldschmidt, Victor. 2006. "Remarques sur l'origine épicurienne de la 'prénotion'." In *Les stoïciens et leur logique [Actes d'un colloque tenu à Chantilly du 18 au 22 septembre 1976]*, 2nd edition, edited by Jacques Brunschwig, 155–69. Paris: J. Vrin.

Kahn, Charles H. 1973. *The verb "be" in ancient Greek*. Dordrecht: D. Reidel.

Konstan, David. 2011. "Epicurus on the Gods." In *Epicurus and the Epicurean Tradition*, edited by Jeffrey Fish and Kirk R. Sanders, 53–71. Cambridge: Cambridge University Press.

Long, A. A. 1974. *Hellenistic Philosophy: Stoics, Epicureans and Sceptics*. London: Duckworth.

———, and D. N. Sedley. 1987. *The Hellenistic Philosophers*. Cambridge: Cambridge University Press.

Lucretius. 2001. *Lucretius: De Rerum Natura Libri Sex. 3: Commentary, Books IV - VI, Addenda Indexes, Bibliography*. Translated by Cyril Bailey. Special ed. Oxford: Clarendon Press.

Mansfeld, Jaap. 1993. "Aspects of Epicurean Theology." *Mnemosyne* 46, no. 2: 172–210.

Morel, Pierre-Marie. 2008. "Colloquium 2: Method and Evidence: On Epicurean Preconception." Proceedings of the Boston Area Colloquium in Ancient Philosophy XXIII, edited by John J. Cleary and Gary M. Gurtler, 25–55. Leiden: Brill.

Obbink, Dirk. 1989. "The Atheism of Epicurus." *Greek, Roman and Byzantine Studies* 30, no. 2: 187–223.

———. 2002. "'All Gods Are True' in Epicurus." In *Traditions of Theology: Studies in Hellenistic Theology*, edited by Dorothea Frede and André Laks, 183–221. Leiden: Brill.

Pater, Walter. 1927. *Marius the Epicurean: His Sensations and Ideas*. London: Jonathan Cape.

Rist, John M. 1972. *Epicurus: An Introduction*. Cambridge: Cambridge University Press.

Schofield, Malcolm. 1979. "Preconception, Argument, and God." In *Doubt and Dogmatism: Studies in Hellenistic Epistemology*, edited by Myles Burnyeat and Jonathan Barnes. Oxford: Oxford University Press.

Sedley, David. 2011. "Epicurus' Theological Innatism." In *Epicurus and the Epicurean Tradition*, edited by Jeffrey Fish and Kirk R. Sanders, 29–52. Cambridge: Cambridge University Press.

———. 2018. "Epicurean Theories of Knowledge from Hermarchus to Lucretius and Philodemus." In *Hellenistic Theories of Knowledge*, edited by F. Verde and M. Catapano. Special issue, *Lexicon Philosophicum*: 105–21.

Sextus Empiricus. 1983. *Against the Logicians. [Volume 2 of the Loeb Classical Library edition of Sextus Empiricus]* Translated by R. G. Bury. Cambridge: Harvard University Press and London: William Heinemann Ltd.

Thomas, Nigel J. T. 2021. "Mental Imagery." *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Revised 12 September, 2014. https://plato.stanford.edu/archives/fall2021/entries/mental-imagery/.

Tsouna, Voula. 2016. "Epicurean Preconceptions." *Phronesis* 61, no. 2: 160–221.

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Note: The entries "Aristotelian texts" and "Platonic dialogues" are intended to guide readers to discussions of, or insights about, the various texts listed there. They do not provide a complete index of citations to the works of these philosophers. Similarly, the entries given under "Platonic characters" are those characters who are discussed, not just mentioned, in the chapters.

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